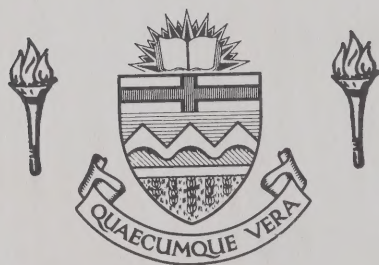


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MICRO-TRAINING: PROCESS AND EVALUATION

by



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A THESIS

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ABSTRACT

This study reports on the development, implementation and evaluation of an instructional module designed to teach essential communication skills in the affective domain to student-teachers. The module includes: lectures, group discussions, role-play, demonstrations, simulation activities, micro-training workshops, independent study and readings.

These elements were integrated and presented in a systematic functional order. All written materials were contained in an instructional manual organized to provide an ongoing framework for class activities. In addition to relevant theoretical materials, preparatory materials for each class meeting, self-tests and assignments, the manual included a variety of observation instruments to be used as feedback for the practicing student-teacher.

Two series of micro-training workshops were run. The first concentrated on the acquisition, development, and appropriate use of affective skills in a micro-counselling setting. The second focussed on the effective application of the skills in a micro-teaching situation. The subjects were 27 education students. The majority were holders of approved degrees returning to obtain a professional teaching certificate. The research design was as follows: an experi-

mental group of 15 students (three sub-groups), and a control group of 12 students (two sub-groups). All groups and sub-groups differed in terms of their exposure to the micro-training elements.

The main data source consisted of a 15-minute lesson given prior to and following the formally-organized course. These data were evaluated by seven raters using a Teacher-Effectiveness instrument, consisting of cognitive-, affective-, and overall-effectiveness scales. The materials were supplemented by a Bales Interaction Process Analysis (1970), and a modified McLeish/Martin Operant Analysis (1975). Raters and coders were subjected to rigorous training programs and reached a high degree of reliability.

Analysis of Variance of the Teacher-Effectiveness Data yielded treatment effects. The experimental group was significantly different from the control group on all three scales. However, comparisons between sub-groups in the experimental and control groups, respectively, were non-significant.

Teacher-effectiveness was also investigated by means of canonical correlations between Effectiveness ratings and the Bales analyses. The two sets of data did not relate in any significant way as far as cognitive effectiveness is concerned, but significant relationships emerged in the affective and overall analyses.

Single-case studies of student-teachers were analyzed using a modified McLeish/Martin technique. Differences emerged in the salient operant profiles for teachers designated poor, average, and excellent by the raters. The fundamental communication operants (mands, tacts and extended tacts) were the key elements in effective teaching strategy. A time analysis conducted over 4-minute intervals reflected the dynamic phases of instruction.

Implications for micro-training were discussed in terms of incorporation of the technique in teacher preparation programs.

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CHAPTER I

INTRODUCTION

Three issues have remained unchanged in the educational literature over the past twenty years: (1) research is equivocal on the definition of 'effective teaching'; (2) teacher training programs neglect the affective domain; (3) most published educational research is of mediocre quality!

The first two issues comprise the focus of this thesis. The third issue imbued this research worker with the optimism needed to formulate, implement and evaluate the endeavour. For, if we assume that the quality continuum of educational research can be approximated by the normal curve, then our strategy as research workers in arriving at a methodology becomes obvious.

We should be able to eliminate the vast majority of studies (at least fifty per cent) due to faulty design, evaluation and assessment. As we eliminate, we begin to develop criteria for effective teaching and training through an initial categorization of relevant studies. As we continue our search, we become aware of the interaction and interrelationships between categories. Decisions to discard, collapse or add categories are based on the relevance of studies to our criterion. Our synthesis is complete when the number of relevant criterion categories remains con-

stant, and when the information gleaned from additional research articles is redundant.

As a result of the above elimination procedure, a specific training methodology developed: competency-based teacher education using a technical skills approach, with special emphasis on 'micro-training'. The methodology for evaluating the effects of the training program and for relating the results to teacher effectiveness derived from several areas of theory and research. Each area was judged to offer its own unique contribution to the study of the classroom environment: communication theory, the psychology of the small learning group, classroom observation systems, interaction analysis, learning theory and instructional design.

The above mentioned review of the literature confirmed the need for a teacher-training program in the use of affective communication skills in the classroom. Some of the reasons advanced by research workers follow.

Ringness (1975) comments that one finds affective behaviors in any school situation--indeed, in any situation--but compared to cognitive learning, relatively little affective learning has been deliberately introduced into the curriculum. Ringness refers to the Holt (1964) study as only one of many attesting to the failure of schools of education to adequately consider affective behaviors as contributing to the learning environment:

. . . the schools have not really concerned themselves with the rub-off of what is taught and the ways it is taught on the emotions, attitudes, values (and learnings) of students.

(Ringness, 1975, p. 14)

Gregory (1972) in his introductory pages of a manual of simulated events designed to acquaint student-teachers with affective interaction in the classroom, states:

More and more teachers are coming to feel the squeeze of the 'content press' that has defined many personal concerns of teachers and students as illegitimate subjects. We react on the basis of our feelings, but we raise generations of children who are so inexperienced at consciously dealing with feelings that their most rudimentary attempts at communicating them often fail miserably.

(Gregory, 1972, xi)

Kahn and Weiss (1973) observe that most classroom teaching is concentrated on the realization of cognitive objectives. Often it is assumed that students will acquire relevant affective behaviors as a result of cognitive learnings. Kahn and Weiss judge as an untenable assumption the belief that a student will 'develop' positive attitudes towards subject matter, school, education, the teacher and others just by coming to school and interacting with curriculum materials, other students, and the teacher.

Brown (1975) was the author of a chapter in the 1975 yearbook of the National Society for the Study of Education, "The training of teachers for affective roles", and makes the following comment:

The neglect accorded the affective role of the teacher is curious. Anyone who has thought even

a little about the subject knows there is always an affective component in learning. If the student is involved in any way in an act of learning, negative and/or positive affective components are present. . . . What seems incredible is that for as long as we have known about the affective components of learning they have not been recognized explicitly in the structure of lessons or curriculum, nor have we usually accounted for them in teaching methodology.

(Brown, 1975, p. 174)

Carkhuff (1971) advocates the incorporation of systematic human relations training in teacher-preparation programs. Carkhuff opines that effective education is a function of the interpersonal skills which make for an effective teacher-student relationship plus an effective teacher program. When either relationship or program is present, benefits accrue to the student. When both relationships and programs are present, maximum benefits accrue to the student (Carkhuff, 1971, p. 11).

Amidon and Hunter (1966) in their book entitled: Improving teaching: the analysis of classroom verbal interaction note that some educators deprecate any teacher responsibility for pupil development in the social and emotional areas, saying that teaching should concern itself with cognitive learning.

However, there is a great deal of evidence to show that much cognitive learning will be lost if the social and emotional development of pupils is not dealt with in the classroom. . . . and so this book includes counselling among the teaching activities of the classroom. Of course, teachers are not primarily counsellors, but they must recognize and work with pupil feelings if they are

to help pupils fully utilize their intellectual potential.

(Amidon & Hunter, 1966, p. 146)

Dealing with pupils' feelings in positive and helpful ways, continue the authors, requires skills which can be learned (and taught).

Purpose of the Present Study

Specific objectives of the present study were:

- (1) to develop and implement a mini-course (protocol materials module) entitled: Affective Communication Skills in the Classroom. It was anticipated that this pre-service training module would be used by student-teachers in their graduating year. The components of the mini-course were:
 - (i) a manual - the manual contained all of the necessary instructional materials for the course (preparatory lecture materials, selected reference lists; procedures, assessment forms, skill description and breakdown, schedule of activities etc.) - the manual was designed as an interactive instructional vehicle for the student (self-tests, assignments, references, were included, and the student was advised to bring the manual to class so that notes could be added when necessary)
 - (ii) discussion sessions - monitored by the instructor(s), during which preparatory materials were clarified and elaborated upon, and interactive communication encouraged
 - (iii) demonstration sessions - during which the instructor(s) demonstrated appropriate and inappropriate usage of the affective communication skills
 - simulations, role-play would involve class members

(iv) videotape recorder - cue discrimination, modelling, and feedback components of micro-training were enhanced through the use of videotape equipment

(v) workshops were conducted for the application and practice of the skills by the student-teachers. The workshops used the micro-training technique, and concentrated on the acquisition, application, and improvement of skills in both micro-counselling and micro-teaching situations.

(2) to select evaluation procedures which consisted of:

(i) emphasis on process as well as outcomes as related to the integration of knowledge and teaching skill as embodied in the micro-training paradigm

(ii) emphasis on the inter-relation of affective and cognitive skills in classroom communication and effective teaching-learning

(iii) a rigorous training program for raters, coders, and assessors, which included monitoring of their activities, and the encouragement of their observations on the functional and descriptive aspects of effective teaching behaviors

(3) A more general aim of the proposed study was to contribute towards resolution of the gap between psychoeducational theory and application in the area of teacher-training programs. This was to be accomplished by several means:

(i) the mini-course was designed to foster an instructional, affective, and interactive climate in which student-teachers could learn about, practice, and acquire competency in those communication skills hypothesized to be helpful to them in their profession

(ii) design of the manual was intended to be self-instructional: that is, with a minimum of

training, an instructor could utilize the module and modify it to fit temporal demands, course aims and entering behaviors of trainees.

- (iii) interpretation of the results would be in terms meaningful and useful to those instructors involved in the training of student teachers; i.e. suggestions for improvement and recommendations on usage.

Overview

Chapter I is an introductory chapter designed to acquaint the reader with the need for teacher-training in affective communication skills. The chapter also discusses the purposes of the present study. Chapter II contains a review of selected studies judged to be relevant to this thesis. The review includes sections on: micro-training (micro-teaching and micro-counselling); current training methodology in affective skills; social interaction analysis techniques in the classroom; teacher effectiveness research. Chapter III outlines the research methodology employed in the present study. The results of the experiment are presented in Chapter IV. Discussion of the results, including recommendations for further research and implications for teacher-preparation programs, is contained in Chapter V. Selected references and various appendices (including the instructional manual) complete this report.

CHAPTER II

A REVIEW OF RELATED LITERATURE

Overview

This literature review is not intended as a detailed study of the results of research. Rather, the review illustrates the incorporation of key ideas or principles from four inter-related areas of research into the rationale for the present study: (1) micro-training (micro-teaching and micro-counselling); (2) affective learning and training; (3) social interaction observation techniques; and (4) teacher-effectiveness evaluation.

1. Micro-training

Micro-training is a systematic behavioral approach to skills acquisition. The term 'micro-training' appeared in psychoeducational literature in the late 1960's as a comprehensive paradigm which would subsume the already-established micro-teaching technique (1963) and the developing micro-counselling concept (1966), and which could be extended not only to other innovative and exploratory adaptations in the helping and educational professions, but also to business, community, and industrial concerns.

Briefly, micro-training is a skills training technique

with both teaching and learning components. It is scaled down in terms of time and complexity of desired target behavior. Micro-training may take place in either a dyadic or small group setting; and the content of the interaction period from which performance measures are taken may be either a simulation, role play, or a real-life event. Of interest are the skill acquisition behaviors of the trainee, and the interaction between teacher and learner, and/or among group members (if the training situation is non-dyadic).

The principal aim of micro-training is to provide experiences which serve as a bridge between classroom or textbook theory and actual practice. The structure of micro-training provides a framework for the acquisition of a behavioral repertoire of precisely defined skills within a given disciplinary or professional area. Micro-training shortens the instructional and interactional period, and provides for intensive practice until a skill is learned thoroughly. The concept of the 'single skill' is a vital part of the procedure. Video- or other types of recordings are played back to provide important supports for the learning and retention, the transfer and generalization of skills to more complex, 'real-life' situations. Thus on-the-job tests reveal the effectiveness or otherwise of the particular procedures.

The essence of micro-training is systematically to

break down a desired target behavior into manageable components and to provide the trainee with effective instruction and the opportunity to practice and acquire each component. The final task of the trainee is to integrate each of these components into the projected behavior. Micro-training can be terminated when the trainee demonstrates a specified level of competence in the target behaviors. Training procedures normally involve cue discrimination and specific suggestions for improvement using video and/or audio recordings, written materials and supervisors' comments on an actual re-play of the performance.

Micro-training may be conceptualized as a cybernetic system, with recursive loops which ensure that certain defined performance criteria are reached in all component parts of the system. The full complement of the micro-training model ('feedback', 'modeling', supervision with cuing and discrimination) is generally thought to be the most effective way to exemplify and to develop the specific skills. If the behavior is simple, the basic framework may be shortened. With more complex skills, the importance of extended training becomes manifest. It is also true that some individuals require only certain parts or elements of the training program, while others learn best from the full treatment module. The appeal of the micro-training paradigm is in its flexibility--it can be modified and extended in innovative ways: it can be designed to be as comprehensive and sensitive

a training method as the complex and differential behaviors and the individuals involved in the training program.

Micro-teaching

Micro-teaching was originally introduced at Stanford University in the early 1960's as a teacher training tool. The term 'micro-teaching' was coined by D. W. Allen and associates in 1963. Micro-teaching is a teaching situation which is scaled down in terms of time and numbers of students. The trainees (student-teachers) performing the teaching role are expected to concentrate on a limited number of specific teaching skills or behaviors in each lesson.

The micro-teaching paradigm includes the following elements:

1. The trainee studies a specific teaching skill. This orientation prepares the student for application of the skill, and may include any or all of the following: (i) written materials describing the rationale involved in the isolation of a specific skill, (ii) documented evidence of the effectiveness of this method of skill acquisition, (iii) written or video- or audio-recordings of examples and non-examples of the skill, (iv) opportunity for cue discrimination.

2. The trainee attempts to use the skill in a five to ten-minute lesson to a group of not more than seven pupils. This micro-lesson is recorded either on video-tape or on audio-tape.

3. The trainee receives 'feedback' about the quality of his performance. This feedback takes place, if possible, immediately after the micro-lesson, when both the trainee and a supervisor review the tape together. The training materials are usually explicit enough so that self-assessment can take place in lieu of supervisor input, or in addition to this input. Written evaluation from the students to whom the lesson was presented is an additional source of feedback.

4. The trainee utilizes information from the feedback session to improve his lesson plan. He then teaches the same lesson to the same, or to a new group of pupils. This lesson is also taped.

5. Feedback from the supervisor and/or students in the class is then given the trainee in a review of this second attempt to exhibit the teaching skill in question. If the criterion of performance is not met, the cycle is repeated.

Micro-teaching programs may deviate from the above model, depending on variables such as: the specific needs of the student, the constraints of the individual institution, the demographic composition of the student population, the subject area as well as the difficulty of the skills being acquired. Other variable elements of the model are: lesson length, number of times the lesson is taught, the amount and the kind of supervision, the use of video-tape or audio-tape recordings. (Allen & Ryan, 1969; Borg, 1970;

Cooper & Allen, 1971; Jensen, 1974; Manis, 1973). Jensen (1974) advises that:

One must select, from the possible combinations of variables, those which best fit the parameters of requirements and constraints defined by a particular instructional need (p. 9).

A controversy has developed as to whether micro-teaching can include simulation procedures: i.e. the teaching to actual students vs the teaching of peers. Allen and Cooper (1971) do not view micro-teaching as synonymous with simulated teaching, and state:

Many reports of micro-teaching programs describe the students as peers, that is, fellow student teachers. The authors of this paper do not consider this to be micro-teaching. In many cases, the peers are usually role playing: they are acting as they think secondary or elementary school students would behave. Even if they are not role playing, but behaving naturally, they are still not part of the population the student teachers are preparing to teach. While peer teaching can be a very valuable experience, the authors believe it should not be equated with micro-teaching, where the students are 'real'. (p. 2)

Research evidence does not support this disclaimer of simulation techniques in education (Cherryholmes, 1966; Goodman, 1973; McLeish, 1970). Nonetheless it is true that the original philosophy and design was to provide student teachers with the opportunity to teach real students in an environment less threatening than the actual school room (Allen & Ryan, 1969, pp 47-54).

Ward (1970) in a survey of micro-teaching in secondary education programs gives some practical reasons why a vast

number of institutions utilize peers as students: (i) difficulty is often encountered in obtaining actual pupils; (ii) the practice of paying students for their services is not only restrictive, but also an undesirable practice in educational research. Schuck (1971) reports that where the number of prospective teachers to be trained is prohibitive, micro-teaching should be expanded to include the trainee's classmates. There are in fact valid reasons for including peers as students within a properly devised program. Belt (1968) and Schuck (1971) feel that having the class observe and criticise fellow trainees has several advantages: observing others teach and discussing their performance is a learning experience and may lessen the number of presentations required by each trainee to alter his own teaching behavior; the evaluation process is expanded, and enables the trainee to assess his own teaching behavior more critically; group observation of lesson presentation can result in a variety of creative approaches for presenting similar lessons or concepts.

Jensen (1974, p. 7) notes that the term micro-teaching is used in two ways: in a generic, inclusive sense to identify all condensed practice systems; and in a more precise sense to distinguish between teaching real pupils (micro-teaching) and teaching peers who simulate or role-play pupils (micro-simulation). In this thesis, the generic inclusive term for all condensed practice systems will be

referred to as micro-training: micro-teaching is viewed as only one example of a micro-training technique and will include in its definition of student or 'pupil' any individual(s) participating in the teaching situation (peers, superiors, pupils).

There are several assumptions underlying the concept of micro-teaching: (1) teaching may be operationally defined as consisting of specific acts and skills in performing these acts (the technical skills approach); (2) the mastery of these skills increases the probability of becoming a successful teacher: (3) increasing a teacher's repertoire of skills provides him with the opportunity to be both flexible and versatile; (4) the process of micro-teaching--that is, the presentation of information regarding a particular skill, practice in incorporating this information in a scaled-down classroom setting, feedback on performance, repeating the cycle if necessary--facilitates the acquisition and refinement of specific teaching skills.

A. Micro-teaching: Exemplars

There are various 'systems' which have incorporated the micro-teaching paradigm. Although there is an element of overlap in the four examples which follow, the specificity of each justifies separate treatment.

1. A Component Skills Approach. This approach attempts to reduce the complex act of teaching to a manageable series

of interrelated behavioral sub-skills. In this approach, activities such as questioning, explaining and reinforcement, which are believed to be fundamental to the act of teaching, have been operationally defined (Allen & Ryan, 1969).

The practice of focussing on one teaching skill at a time until a repertoire has been built up was used by Aubertine (1963) in the course of the first micro-teaching 'clinic' at Stanford University. Although micro-teaching was considered a major improvement on the demonstration lessons used previously in teacher training, a rationale justifying the methodology of teaching was lacking. Aubertine gave beginning teachers specific instruction in the performance of the teaching skill of set induction. This is a pre-instructional technique which involves preparing the students for the content of a lesson by 'setting them up' for learning with a dramatic introduction (an analogy, a demonstration, or the posing of an intriguing problem). The result of this orientation was a significant improvement in the organization and presentation of the lesson. Aubertine's study was the catalyst for subsequent micro-teaching clinics which trained beginners in the technical or component skills needed in the classroom. The 1963-64 microteaching clinic at Stanford University concentrated on the following skills: (i) stimulus variation - this means

that a teacher is trained to become a more varied stimulus in the classroom. Skills include: movement, gestures, focussing, interactional styles, and shifting sensory channels. The aim of acquisition of stimulus variation skills is to attract and hold the attention of the students. (ii) set induction - this is a pre-instructional orientation to a lesson designed to motivate the students and gain their attention. (iii) closure - this term has its origins as one of the principles of Gestalt psychology. In Gestalt theory, closure describes the process by which percepts, memories, actions, etc., attain stability via the subjective closing of gaps or completion of incomplete forms so as to constitute wholes. Closure is achieved when the major purposes and principles of the lesson are judged to have been learned so that new knowledge can be related to past knowledge. The aim of training is not simply to achieve instructional closure (reached when the lesson is completed and the teacher has shown the link between past knowledge and new knowledge) but to achieve cognitive closure (reached when the students have made the link between old and new knowledge). Closure may be achieved by reviewing the sequence followed in moving from known to new material, by applying what has been learned to similar examples and cases, or by extending material covered to new situations. The skill of closure is best taught in a longer micro-lesson of approximately 20-30 minutes (Allen & Ryan, 1969, p. 20).

(iv) silence and nonverbal cues - this serves to reduce teacher talk and increase student participation. Skill training in facial cues, body movement, head movements, gestures, is involved. (v) reinforcement skills - these encourage class involvement, and serve to prevent the teacher from becoming completely wrapped up in content. Attention is paid to both nonverbal and verbal reinforcements. The importance of rewarding shy or passive students instead of only searching for responses from the more vocal or active student is also stressed. Other skills in the 'questioning' area, for example, include: fluency in asking questions, probing questions, higher-order questions, divergent questions. Skills in the 'attention' area include: recognizing attending behavior, illustrating and use of examples. Skills of lecturing, planned repetition, and completeness of communication have also been defined.

2. Competency-based Training Model. Jensen (1974) states that micro-teaching is entirely competency-orientated, and lists some of the characteristics of micro-teaching that make it highly adaptable to competency-based teacher training. It provides a practice arena in which competent performance may be analyzed, and also provides for continuous 'feedback' and evaluation. The structural elements of the competency-based model, as outlined by Jensen (1974) are:

- A. Determining desired outputs
 1. Identification of instructional goals.

2. Definition of target competencies.
3. Definition of behavioral objectives associated with defined target competencies.
4. Definition of criterion performance for each objective.
- B. Implementing input procedures
 5. Selection of a suitable training arena in which trainees can practice applying the skills and techniques in which they are to become competent.
 6. Implementation of a program of repeated trials until a specified criterion is achieved.
 7. Provision for 'feedback' to trainees and their supervisors.
- C. Evaluating outputs
 8. Implementation of a method of evaluating trainee competence.
 9. Follow-up evaluation to assess the relevance and appropriateness of competencies in terms of their comprising professional training.

(Jensen, 1974, p. 4)

Micro-teaching, continues Jensen, involves all of these elements and at the same time provides a method of directly observing trainee performance. Further, when trainees are given micro-training, the question of whether or not they have developed relevant competencies is not left to speculation since the trainee must actually demonstrate competence in the micro-lessons.

3. The Mini-course. In May, 1966, W. R. Borg became Program Director at the Far West Laboratory for Educational Research and Development in Berkeley, California. The educational problem he chose was to improve the effectiveness of teacher education. This research contributed to a series of efforts being carried out at twenty regional educational laboratories set up by the U.S. Office of Education in 1965

in an attempt to find solutions to major educational problems. The mini-courses developed at the Far West Laboratory were focussed on building a teacher education strategy that would overcome the weaknesses of conventional programs. The concept of micro-teaching was included as one of the foundations of the model, although the technique had not yet produced the magnitude of behavioral changes that Borg considered necessary for a program to have practical value for training teachers. The focus was to be on specific teaching skills. Following the Stanford lead, modeling was included as a component of the mini-course, through the use of illustrative film sequences. The mini-course approach to training is a self-instructional adaptation of the Stanford micro-teaching model. One of the immediate problems faced by the Far West group was how to provide adequate feedback to the learner, without recourse to trained supervisors. It was felt that if materials were to be widely used in colleges of education and in-service programs, the requirement of extensive supervisory training would reduce the chances of achieving widespread dissemination of the material. Self-feedback or self-assessment procedures were incorporated in the instructional approach to solve the problem. The trainee would make a video-tape of his micro-lesson, replay the video-tape and evaluate his own use of the specific skills he was learning. A checklist or observation form focussing

on specific skills would aid in the evaluation.

Mini-course I contained thirteen behaviors, and was aimed at elementary school instruction. The main emphasis of this mini-course was to develop effective questioning skills, although other skills were also presented as part of the unit. Although several mini-courses have since been designed, field tested, and implemented, Mini-course I has achieved relatively more success. This is due in large measure to the fact that the skills are simple, easily observed and measured, and fall largely within the cognitive domain of instruction. To illustrate, the instructional procedures for training in effective questioning skills (Mini-course I) follows.

The questioning skills are taught by means of a filmed presentation. The skills are described as an instructional lesson, and include illustrative film clips showing teachers using the desired questioning behaviors. A handbook is given to each student-teacher describing the rationale for the skills, definitions of each skill, written examples, multiple choice quizzes, instructions on self-ratings, etc. Immediately following the instructional film, the student teachers are exposed to a modeling film in which a model teacher illustrates all questioning behaviors in a micro-teaching situation. The student-teacher is asked to identify each of the skills on a checklist. The model lesson is then shown again, and the narrator names the behavior as it occurs,

giving the student-teacher an opportunity to check his scores and to correct his inappropriate responses. The student-teacher is then instructed to prepare a short micro-lesson (5 minutes) in which he practices the skills described in the instructional and model films. The micro-lesson is then presented to a small number of students, and the entire episode is video-taped. Upon completing the lesson, an immediate review of the video-tape, including self-assessment takes place. As with micro-teaching, the entire sequence can be run through again and again until a desired criterion of successful performance is reached. As stated above, the mini-course is self-instructional with a minimum of supervision and administration from teaching staff.

4. The Protocol Materials Model. Since 1971, Borg has been engaged in the development of 'protocol materials' in an ongoing project at Utah State University. The term "protocol materials" was originated by B. O. Smith (1969), and refers to materials in the form of original recordings of classroom interactions. These are used to help teachers relate theoretical concepts to actual classroom events.

The protocol instructional model is in some ways similar to the mini-course instructional model. Both employ very specific operational definitions of teacher behaviors, both employ motion pictures of models of these behaviors to be copied. The protocol instructional model is different in the following ways: (i) In protocols the trainee may learn

to recognize the desired behaviors from written simulations based on transcripts made from classroom recordings. Thus both forms of modeling (filmed and written) are employed. (ii) Later, the learner obtains his initial practice in applying the behaviors from written simulations in which certain teacher's remarks are omitted, requiring the student to supply an appropriate remark. (iii) In pre-service training, the trainees work with their peers in role-playing situations which are recorded, played back and discussed by the peer group as soon as the lesson is completed. For inservice teaching, the protocols require the teachers to plan their lessons to exemplify the skills being learned, teach these lessons in their own classroom, and record them. Each teacher then works with a colleague who is also undergoing training. The teachers play their audio-tapes, recording each other's performance on a checklist and discussing their use of the skills being learned.

B. Uses of Micro-teaching

Micro-teaching has been used extensively in pre-service and in-service education of teacher-trainees at both the elementary and secondary levels. In pre-service training, the basic technical skills needed to communicate effectively in a classroom constitute the training focus. With in-service training, micro-teaching has been used as a framework for team presentation, as a means of ascertaining the proper instructional level of materials, as a method of pre-employ-

ment selection and as a means of training supervisors to evaluate beginning teachers. Basic component skills have been taught at in-service clinics to make up for the lack of proper initial training programs.

Micro-teaching has also been used in higher education, with community college and university faculty members. It has also proved effective in the training of peace corps and inner city teachers. The basic elements of micro-teaching have also been applied to micro-counselling, in medical education, and in human relations training for teachers. The method has also been used effectively in the training of educational administrators, business executives, salesmen, equipment operators and plant foremen. Jensen (1974, p. 5) states that micro teaching is well-adapted for use in almost all training situations which are competency-based.

The majority of studies are experiential rather than experimental in character. In relation to research findings, Cooper and Allen (1970) state that it is difficult to summarize these because of the different objectives, subjects, conditions, and other variables involved. However, some generalizations about micro-teaching can be made:

1. Using a micro-teaching sequence--such as teach-critique/reteach-critique--positive changes can be achieved which result in a larger repertoire of teaching behaviors.

2. Performance in a micro-teaching situation can accurately predict subsequent classroom performance.
3. Trainee acceptance of micro-teaching as a relevant training procedure is high.
4. The feedback or recursive loop in micro-teaching is probably the crucial one in terms of changing the trainee's behavior.
5. This feedback can come from several sources, but the most powerful combination seems to be one that utilizes supervisory comments, video-tape recordings and pupil comments.
6. The immediacy of feedback (using video-tapes and supervisors) is not crucial to the acquisition of some behaviors.
7. A perceptual model that demonstrates positive instances of the desired behavior, rather than a mixture of both positive and negative, is more powerful in enhancing the trainee's ability to acquire the skill.
8. For certain skills, a perceptual model is preferred over a written description of the skill, while for other skills the evidence is inconclusive.

(Cooper & Allen, 1970, p. 17)

Although the overall effectiveness of micro-teaching has been demonstrated by a number of investigators, little systematic experimentation has been carried out on the importance of such variables as: the number and types of pupils, lesson length, number of practice lessons used, transfer of micro-skills to the actual classroom, developmental aspects of skill acquisition, application of micro-teaching to skills lying in the affective domain. Research workers are not unaware of these gaps in our understandings. Cooper and Allen (1971) state that the research that still needs to be done on micro-teaching breaks down into two categories: the first involves the study of teaching skills

(validity, transfer, interaction amongst skills, systematic identification of skills, appropriateness criteria); the second relates to the micro-teaching process itself and training protocols (type of model, teach-reteach cycle, length of lesson, number of students involved in a lesson, the time interval between lessons, delay between teaching sessions and feedback, feedback relationships, number of skills to be practiced per training session, review procedures).

Manis (1973) has conducted a comprehensive examination of the effectiveness of micro-teaching in teacher training. He states that micro-teaching research is characterized by features common to other research on teaching. The major problems are in the area of description, measurement and interpretation. Manis claims that two kinds of issues remain to be resolved: the refinement of the micro-teaching process so as to maximize its effect on student-teachers' performance; and the appropriateness of the micro-teaching model to the training of teachers. Manis also concludes that the best source of evidence for micro-teaching effectiveness is provided by research findings proceeding from the Stanford micro-teaching clinics and the Far West mini-course programs.

Micro-counselling

The extensive work in micro-teaching carried out by

Allen and his associates in the mid-1960's laid the basis for the development of the technique of 'micro-counselling'. This was implemented by research workers at Colorado State University (Haase, Ivey, Miller, Morrell, Normington, 1966-68) and later at the University of Massachusetts (Phillips, Moreland, Lockhart & Ivey, 1968-71). These research workers also drew on R. Carkhuff's 1969 program of training in the facilitation of human relations.

Micro-counselling is a simulated interview situation in which a beginning counsellor and a volunteer client talk about real problems. Micro-counselling focusses on single, very specific counsellor behaviors instead of attempting to teach all the counselling skills at one time (Ivey, 1968, 1971, 1974).

The micro-counselling paradigm consists of the following elements:

1. Video-taping a five-minute counselling session between a volunteer client and the trainee student-counsellor. The client may be either a student or an actual client.
2. Training includes (i) studying a written or programmed text describing in detail the specific skill being taught, (ii) analysing a video-tape of an expert interviewer demonstrating the skill, (iii) the simulated interview which is recorded and played back for reviews and assessment, (iv) supervisory comment and advice.
3. The entire procedure is then repeated: i.e. a second five-minute video-taped counselling session with the same or a different client is obtained.
4. This session is examined. If necessary a further repetition is conducted and recorded.

The number of repetitions depends on the skill level developed by the trainee.
(Ivey, 1974, p. 173)

Set instructions may be given prior to the initial video-taping session. Evaluation forms are usually filled out by the client (an assessment of the student-counsellor's behaviors) after the micro-counselling session. The client may also be interviewed by a second supervisor. This information is passed on to the student-counsellor during his training session. Supervisor participation is not limited to discussion of the video-taped performance. It may also include a contextual discussion of the session, and of the manual or other materials. The supervisor models the basic skills in his own interaction with the trainee, and offers specific suggestions for improvement.

This last point is important. The supervisor, or trainer, must himself use the 'relationship skills' (personal involvement, a friendly, warm and genuine attitude, etc.) during the training so that the aspiring counsellor may learn these skills and also generalize them to other situations at a later date. The trainee has to discriminate between positive and negative instances of the skills being taught. This may be done using simulated models in addition to the student's own video-taped attempts.

The paradigm involves at least one opportunity to repeat the micro-counselling session after receiving training and feedback. There are no limitations on the number

of times the lesson is critiqued and repeated. However, in a particularly difficult or complex skill, the training materials may have to be modified to allow discrimination to take place. The numbers of video-playbacks as well as the number of models provided for the trainee can be varied. Role playing, simulation, rehearsal of specific skills, peer group observation and criticism--all have been utilized in the time segment between the original and final video-taped session.

With some trainees it is possible to teach more than one skill at a time (clusters of related skills). Other trainees, when experiencing difficulties, may need to have the skill broken down into smaller units. The supervisor or trainer must therefore be flexible, and aware of the trainee's difficulties and progress, and modify the program accordingly. The supervisor must have a number of alternative responses and teaching strategies available. An interactive relationship is important.

A. Assumptions

Micro-counselling is based on several essential propositions. According to Ivey (1971) these include: (i) reduction in complexity through focussing on single skills. This allows students to progress at their own rate and to see immediate improvement in performance; (ii) opportunity for self-observation, confrontation and feedback provides the

trainee with guidelines for future improvement; (iii) the observation of good examples or models on video-tape results in vicarious learning; (iv) micro-training sessions are real situations, even if the procedures are one step from the 'natural' environment, in the sense that they are role plays or other kinds of simulation; (v) micro-simulation is a method which can be used to teach skills covering a very wide range of diverse theoretical and practical frameworks.

The technique of micro-counselling is behavioral in that observable behavior, and measures of that behavior, are of primary importance. Ivey et al (1971) have provided precise behavioral definitions for both the beginning and more complex helping skills. Operant procedures are incorporated in the various components of micro-training. Ivey (1971) utilizes Skinner's research findings and his general views to support his own research.

B. Training Materials

Systematic training materials and procedures in the form of written manuals outlining each micro-counselling skill and video-taped models of appropriate behaviors have been developed by Gluckstern and Ivey (1974). Once the trainee has acquired the beginning skills, they encourage a more participatory approach, so that trainees develop their own concept of the skill and their own procedures and models. The standard format is a mere reference point.

Innovation in the use of the format is encouraged (Ivey, 1971; Gluckstern & Ivey, 1974).

Following in the track of Borg (1966, 1971) the same authors have adapted their methods to the use of large groups and workshops (Gluckstern & Ivey, 1974).

C. Skill Clusters

Ivey has organized the micro-counselling skills into four progressively more complex categories, which are referred to as skill clusters. In keeping with the notion of a participatory approach, a standard format is available only for the beginning skills. As one proceeds into the more complex clusters of skills, training materials and procedures are limited to a brief description. That is, the skills are not operationally defined, and the trainer is left with the responsibility of developing his own training sequences.

A brief description of the four skill clusters as contained in published articles by Ivey during the period 1966-1975 follows:

1. Beginning skills:

- (i) attending -
 - eye contact, relaxed position, verbal following behaviors (keeping on topic), etc.
- (ii) open-ended questions -
 - questions which leave a number of alternative answers open to the client, and which increase the probability of relevant information being made available to the counsellor

- (iii) minimal encouraging cues -
 head nods, short verbal formulas which
 help the client continue talking, with-
 out changing his direction

These beginning skills are basic interviewing skills.

2. Selective listening skills:

- (i) reflection of feeling -
 paying attention to the emotional reson-
 ances in the comments of the client and
 to his facial or body expressions (non
 verbal components), and giving this infor-
 mation about his emotional states to the
 client
 - (ii) summarization of feeling -
 - (iii) paraphrasing -
 listening to the objective content of the
 client's communication and restating this
 in terms which clarify his own meaning
 to the client
 - (iv) summarization of content
3. Skills of personal sharing of experience and observa-
 tions - direct mutual communication is used to fos-
 ter more open expression on the part of the trainee.
4. Skills of interpretation -
 The counsellor provides a new frame of reference or
 reality for the client. This involves analysis,
 cognitive restructuring, and giving alternative
 meanings or viewpoints to the client. This is the
 most complex cluster of skills. These skills are
 not taught until the trainee demonstrates competency
 in the preceding clusters.

D. Micro-counselling in groups

Research has traditionally been with two-person coun-
 sellor groups (Ivey, 1971). However, recent work by Haase
 and DiMattia (1970) and by Ivey and Rollin (1972) has shown
 the system of training to be effective with larger groups.
 Vicarious learning does occur as trainees watch one another
 on video-tape: this kind of working relationship supports

individual learning. Gluckstern and Ivey (1974) have shown that the method works with groups in the form of workshops even of classroom size.

E. Micro-counselling Applications

Micro-counselling has proved its usefulness in spheres other than professional counsellor training. It has been used in training parents as drug counsellors (Gluckstern, 1971), in teacher training (Rollin, 1970), camp counsellor training (Zeevi, 1970), in pre-training for counselling clients (Haase et al 1969), in co-counselling supervision (Thielen, 1970), in paraprofessional training (Haase & DiMattia, 1970), in interpersonal skills workshops (Clack, Coyne, Strand, 1975) as well as in other training situations in social work, speech pathology, and executive training.

2. Skills Training in the Affective Domain

Travers (1970) refers to affective learning as being one of the unique aspects of classroom learning. One of the reasons for this uniqueness is that there is a paucity of systematic empirical investigations of man's affective behaviors. Standard psychology and education texts discuss this topic only briefly.

Contributing to the lack of objective documentation of affective behaviors in the classroom are difficulties in measuring, analysing and interpreting. For example, there

is often incongruity between nonverbal and verbal behaviors, and between cognitive and affective behaviors. Deciding whether affective learning has occurred is also a problem. An individual may easily hide an attitude or opinion and change his behavior to meet existing demands, but not change that basic attitude. There are few techniques that objectively assess an individual's attitudes, opinions, values and interests. There is disagreement on the meaning of affective characteristics. Finally, there is a complex relationship between cognitive and affective behaviors. That is, the individual is likely to reflect upon an affective issue, and weigh the consequences of his answer.

In spite of the problems of definition and measurement, educators agree that the school environment should provide opportunities for affective learning in addition to the cognitive and psychomotor aspects. As a first step towards operationalizing this general goal, educational and/or instructional objectives must be formulated for each domain of learning. Bloom, Engelhart, Furst, Hill and Krathwohl (1956) and Krathwohl, Bloom and Masia (1964) conducted a systematic survey of educational objectives in the cognitive and affective domains and have prepared taxonomies for these two classes of behavior. The taxonomies provide a framework for specifying specific objectives as well as an alternative to the common abstract statements concerning

instructional goals. An 'official' taxonomy of the psychomotor domain has not yet been published. Simpson (1966) has defined the psychomotor domain as the skill domain involving movement. She has identified the stages to which a teacher must attend if he is to determine an objective appropriate to the learner. Kibler, Barker and Miles (1970) have also attempted to formulate a set of subclasses in the psychomotor domain.

One of the major drawbacks to the taxonomies of behaviors is the difficulty in relegating a given objective to a specific or single domain. Educators accept the fact that affective, cognitive and psychomotor skills are highly interrelated in many areas. Pragmatics however dictate that one of the areas must be emphasized to the exclusion of others in order to measure the achievement of skills objectively. In those objectives which involve complex behaviors, some overlap or integration of each taxonomy may be necessary. For example, in any cognitive task there will be occasions when affective and psychomotor behaviors will become involved. This interrelationship of domains can be used to advantage by a sensitive and knowledgeable teacher.

While recognizing the complex interaction of cognitive, affective and psychomotor behaviors, the greater part of educational research and application has been concerned with the cognitive domain. A trend has developed in the 1970's

towards investigating the role of the affective domain in the school system. Kahn and Weiss (1973) outline this current trend, which has focussed on the teaching of affective responses in the schools. These authors state that while educators recognize the importance of the role of the school with regard to affective outcomes, this interest is generally reflected in the form of vaguely-defined objectives. The extent to which they are reflected in the actual operations of the school is the prime issue.

Although the work of Kahn and Weiss is encouraging, there is the danger that the teaching of affective objectives will become somewhat subject- or content-oriented. That is, affective courses may now simply be regarded as an addition to the required subjects presently being offered in our universities. The student-teacher will have another option in his choice for a specialized knowledge area. However this strong background in an affective content will not protect the student-teacher from similar problems to those faced by his colleagues in the more traditional cognitive areas. The problem is a familiar one--the transition from theory to classroom application, and the thorny issue of teacher effectiveness.

The problems and the answers lie in that aspect of education referred to as 'teacher-training'. It is here that systematic and comprehensive training in the acquisition

of cognitive, affective and psychomotor skills should occur. The training program should provide the trainee with a behavioral repertoire of interactive communication skills which allow him to cope with the varied and complex behavioral events making up any 'normal' classroom day.

Although the affective component of teacher training has been seriously neglected when compared with the cognitive, yet there is a body of literature which addresses the issue. Typical research has centred on the relationship between experiences in the classroom and school and students' feelings about school-related objects; effects of sensitivity training on teacher-learner performance; trainer effects, etc. A selected review of the literature follows:

Carkhuff (1971) believes that systematic human resource training is a necessary precondition of education. Systematic human resource learning had its origins in research on the effectiveness of guidance, counselling and psychotherapeutic practices (Carkhuff & Berenson, 1967; Truax & Carkhuff, 1967). The therapeutic equation has been transferred into a human developmental model with the basic assumption that helping processes and their training are all instances of learning. Systematic human resource development indicates that effectiveness is a function primarily of effective people and of effective programs. The theme of systematic human resource training is skill acqui-

sition. The key to the model is the "systematic expansion of the quantity and thus the quality of an individual trainee's response repertoire in physical, emotional, and intellectual spheres of functioning" (Carkhuff, 1971, p.9). Carkhuff states that trainees are benefitted (or inhibited) by training in relation to the degree of discrepancy between the level of functioning of trainer and trainee. Trainees functioning initially at a high level demonstrate significant gains most quickly and sustain them for the longest periods when trained by high level functioning trainers.

Carkhuff's model is particularly applicable to teacher training. In a selected review of the research into human relations in education, Carkhuff (1971, p. 6) concludes that the results suggest that certain teacher-offered responsive and initiative dimensions (empathy, respect, genuineness, warmth, positive regard) are active and effective ingredients in all human learning processes. Following from this conclusion, Carkhuff proposes a training program for teachers which would combine both affective and cognitive dimensions to effect a constructive learning process. The components would include: (1) training the teacher in skills needed to carry on the usual academic (content) teaching programs; (2) training in skills needed to effect constructive changes in the adjustment of individuals or groups of students; (3) training in the skills needed to train the students in

skills required to make effective academic and emotional adjustment. The affective skills needed would include interpersonal skills necessary to establish an affective communication. This would enable the teacher to gauge the student's frame of reference, to adjust his expectancies and to modify his program accordingly. A high level of communication would enable the teacher to act as a model for the desired skills and behaviors, and to reinforce the student for appropriate behaviors.

Berenson (1971) studied the effects of systematic human relations training upon classroom performance of elementary school teachers, and found that a training which focussed on conditions of empathy, positive regard, genuineness, etc., was significantly related to desirable outcomes. Student teachers were functioning at higher levels in interpersonal skills and were more competent in their classroom performance as judged by classroom and college supervisors. They appeared to be more capable of solving teaching problems relating to planning, management, and teacher-pupil relationships.

Hefele (1971) investigated the effects of human relations training on student achievement, and found an interesting interaction between teachers and trainees. A low active, moderately high facilitative teacher and a high active, low facilitative trainee, who had responded poorly to the inter-

personal training, both plummeted in level of functioning while they were working together. In another situation, a very low functioning trainee who had made very small but positive gains in the interpersonal training exhibited a strong gain while working with a teacher who was functioning consistently well. Webb (1971) and Carkhuff (1969) have also demonstrated this kind of interpersonal interaction between trainer and trainee.

Griffin and Banks (1970) trained teachers directly in the interpersonal and instructional skills needed to facilitate learning in their own particular content area. In this variation of the training-to-teach theme, the teachers were first trained in interpersonal skills, and then trained directly (in the classroom) through a multi-method approach on how to work with children and how to teach a particular subject area.

Ivey and Rollin (1972) designed a curriculum in human relations with a behavioral frame of reference. Their primary objective was to train teachers to act freely and spontaneously--with 'intentionality'. The intentional person is described as one who can generate alternative behaviors in a given situation and approach a problem from different vantage points. The intentional individual is not bound to one course of action but responds appropriately to ever-changing life situations. To act with intentionality, one

must have alternative behaviors available to cope with unique situations. The behavioral objectives curriculum was designed to give student-teachers a set of behaviors and rules appropriate in interacting with students and peers. The basic model of the curriculum is an 'each-one teach-one' approach. A specific area of human behavior is identified (e.g. relaxation, attending behaviors, nonverbal communication). The trainees teach these skills to others. The program combines elements of micro-counselling and micro-teaching: the micro-teaching module is now preceded by a dyadic teaching experience. Performance criteria are provided and instructional alternatives given in an ordered breakdown of the steps necessary to develop a specific skill, and to teach it in an intentional way. The ground-plan is to have a repertoire of alternative behaviors available for use in different situations. This curriculum approach is in operation, although still in the experimental stage at the University of Massachusetts.

3. Social Interaction Observation Techniques

One of the antecedents of the competency-based movement (performance-based, technical skills approach) in teacher education and training was the development of systems for analyzing the transactions of teaching in specific behavioral terms. These interactional analysis, or classroom observation techniques, were derived from the work of such people

as: Anderson and Brewer (1946); Withall (1949); Flanders (1949); Bales (1950); Medley and Mitzel (1950); Thelen (1959); Hughes (1959); Withall and Lewis (1963); and Bellack (1966). Comprehensive reviews of this approach are contained in articles by Medley and Mitzel (1963); Rosenshine and Furst (1973); and Yee (1971).

Proponents of the social interaction approach to the analysis of classroom behaviors state that a social-psychological frame of reference provides the relevant perspective from which to view this complex system. The assumption of interest is that interactive influences emanating from the group itself bring about changes in the behavior of the individual members of the group. The concern centres on the interaction of variables during the group process. Classroom learning is conceptualized as a result of mutual influences in a dynamic process.

From the early 1960's up to the present time, descriptive systematic category systems, particularly classroom interaction analysis, have been used in a variety of ways: (i) to collect specific relatively objective data of teacher and pupil behaviors as observed in the classroom; (ii) to determine teacher effectiveness by relating specific teaching behaviors to specific pupil outcomes, and (iii) to determine the effects of training teachers in the use of these techniques.

A training system is developed based on a category system. The categories in the system become the goals of training, and the function of the trainer is to help the student-teachers to study their teaching and set goals for the modification of their behaviors. It is assumed that the trainee can learn to analyze specific elements of his behavior, gain control over these elements and thus either modify his patterns in a given direction or develop mastery of an enlarged repertoire of behaviors.

There is no one universally accepted observational system which measures all facets of behavior and interaction in the classroom. This derives from the fact that numerous ideas and definitions abound concerning effective teaching. Effective teaching can be described within the context of affective, cognitive, or multidimensional systems. The various observational systems allow the researcher or user to define by objective measures whatever facet of effective teaching is of interest. However, it is difficult to find an observation system that is purely affective or cognitive in orientation. Most systems assume a behavioral inter-relationship, and the importance of this relationship is reflected in the categories.

Three observation techniques are of direct interest to this study: (1) the Bales Interaction Process Analysis, (1970); (2) the McLeish/Martin Verbal Operant System for

Analysis of Communicative Behavior (1973); (3) the Teacher Effectiveness Rating Scales (Oddie, 1976). These systems provide a comprehensive means of analyzing the structural and functional aspects of both affective and task-oriented classroom behaviors. That is, each of the techniques will contribute meaningful information in the analysis of micro-training and in the operationalization of effective teaching behaviors. A brief description of the Bales and the McLeish/Martin techniques follows. The third technique is more appropriately addressed in Chapter III.

1. Bales Interaction Process Analysis

Interaction process analysis is an observational method for the study of the social and emotional behavior of individuals in small groups, their roles and status structure, and changes in these over time (Bales, 1968, p. 456). It is employed to estimate the relative strength of various underlying determinants of overt behavior. This is accomplished by abstracting from the observation the subject-matter (what is talked about) and focussing attention upon the form of the behavior and the changing patterns of action and reaction among individuals by which the content is communicated. The method was developed as a general-purpose descriptive and diagnostic procedure "designed to produce theoretically relevant measures for all sorts of small groups, thus encouraging the development of empirical norms" (Bales, 1968, p.457).

The system comprises twelve social interaction categories. Six categories are concerned with the positive and negative aspects of affective behavior; the remaining six categories consist of task-oriented questions and answers. The system is further conceptualized as forming six reciprocal or opposite pairs, dealing with problems of information, evaluation, control, decision, tension-management, and integration. (See Appendix I, p. 236 for a schematic outline of the system).

Bales (1970) emphasizes the importance of training. For an observer to record an interaction sequence without seriously missing a significant number of acts he must have a high degree of training as well as a full understanding of the rationale which underlies the categories. The reliability of scoring clearly depends on the training of the observer. Anderson (1972) quotes Bales' statement that about one hundred hours of training is necessary to become a skilled Bales observer. The training procedure involves working in teams of two or more. Most of the training occurs while viewing live, small group interaction although the use of video-tapes is also recommended as it allows for playback and subsequent discussion. An experienced observer should be on hand while training is in process. Bales (1970) gives a comprehensive outline of the methods to be used in analyzing interpersonal behavior. This includes training in observation, classifying acts according to priority rules,

interpretation of the data. The frame of reference to be applied to measures obtained from the interaction process analysis consists of a three-dimensional 'social psychological space'. The first dimension is concerned with the power, dominance, ascendance, or individual prominence of the person as perceived by the evaluator: This is the vertical dimension; "upward" signifying power dominance, "downward" power decrease. The second dimension is concerned with the pleasant or unpleasant quality of feeling aroused by the person. "Positive" signifies a pleasant feeling, one of acceptance and liking, while a "negative" evaluation arouses an unpleasant feeling, one of rejection and disliking. This dimension is conceptualized as running from right to left and is horizontal. The third dimension is concerned with the contribution of the person to the performance of group tasks and the achievement of group goals. The direction toward achievement of group goals is said to be "forward", direction away from achievement is "backward". The conception of three independent dimensions, or scales, along which any person, or any act, within the group may be given a position by the social evaluation of group members is a useful basis for classifying positions within the group and directions of motivational movement, types of values, types of acts, types of roles, etc. (Bales, 1968, p. 459). There are at least three measures which can be obtained

from the raw data: an interaction profile, an interaction matrix, and phase movements. An interaction profile is an array of the rates of activity in each category. An interaction matrix is a tabulation of the number of acts addressed by each individual to every other, and to the group as a whole. Phase movements occur under certain conditions of organization, for example, when there is a clear-cut but complex task or group decision to be arrived at within a given session. Bales and Strodtbeck (1951) found that groups tend to move through an orbit of directional movement over the course of a session. McLeish, Matheson and Park (1973) failed to confirm this finding.

Anderson (1972) determined that the Bales' system can be a valuable tool for instructional research, given small group conditions. The system enables an investigator to conceptualize instruction as an affective process, enables the identification of variability in group behavior, allows for a comparison of instructor performance with pre-determined criteria, and provides for a detailed description of the small group instructional process (Anderson, 1972, pp 174-178).

McLeish (1973) supports the efficacy of the Bales' system in the analysis of the learning group:

Whenever students confront instructors in a didactic situation, specific kinds of individual and group dynamic processes can be observed.

These may accelerate or impede instruction.
 . . . These processes can be identified in
 terms of . . . the Bales' system. (p. 170)

2. The McLeish/Martin Verbal Operant System for
 Analysis of Communicative Behavior (1975)

Martin (1973), and McLeish and Martin (1975) have devised a coding system based on the verbal operants defined by Skinner and supplemented by affect categories from Bales' (1970) system. The system analyzes both vocal and non-vocal behaviors. Ongoing interaction of group members are analyzed in terms of a trimember sequence of (a) discriminative stimulus (b) response and (c) reinforcement. Analysis of data taken from 'live groups', as well as verbal transcripts and video-tape recordings of these live sessions, reveals the control exerted by contingencies of reinforcement on specific verbal operants. The system contains ten categories of operants: six define the verbal operants described by Skinner (1953)--mand, tact, extended tact, echoic, intra-verbal, autoclitic. The last operant category, the autoclitic is further subdivided into five categories: autoclitic (dominant control), autoclitic (negative affective), autoclitic (informative), autoclitic (submissive control), autoclitic (positive affective). Research carried out by the above authors shows that the verbal operant categories described by Skinner satisfactorily account for all the communicative behaviors observed in groups, and that the Skinnerian analysis is comprehensive, functional and oper-

ational. The revised coding system has proved to be an adequate instrument for the analysis of group behaviors in a learning context.

Appendix IV provides brief definitions and illustrative examples of the McLeish/Martin (1975) Operant System for Analysis of Communicative Behavior.

In formulating his functional analysis of verbal behavior, Skinner (1957) makes the following distinctions regarding the definition of an operant:

An operant is a unit of behavior composed of a response of identifiable form functionally related to one or more independent variables, and which operates upon the environment. The term 'operant' is concerned with the prediction and control of a class or kind of behavior (as opposed to instance(s) of behavior). An operant specifies at least one relation to a variable--the effect which the behavior characteristically, though perhaps not inevitably, has upon the environment. As an instance of a verbal operant the response must occur as a function of a certain variable.

(Skinner, 1957, p. 20)

A functional relation is more than a mere connection: the stimuli which control a verbal response not only determine its form and thus supply an equivalent for meaning, they increase the probability that the response will be emitted (p. 199). In order to identify any type of verbal operant, we need to know the kind of variables of which the response is a function (p. 36). The point Skinner emphasizes is that verbal behavior cannot be analyzed according to formal

or structural properties.

McLeish and Martin (1975) explicate Skinner's definition as follows:

The nature of a given act depends on the relationship which it has to the units of behavior immediately preceding and succeeding. This relationship decides the category in which it is placed. In other words, each piece of action is viewed as having a particular function. The point is that the same formal act may perform many different functions, depending on the differing contexts in which it is considered. Again, it may perform a number of functions in the same complex situation at one particular time. Each of the functions may involve a different individual, a different pattern of stimulation, a different contingency, and, of course, a different category area.
(pp 24-25)

The McLeish/Martin coding technique is devised to ensure that the behavior of each individual can be coded with a minimum used of intuition on the part of the coder. The observations are synchronized by a metronome beat which is superimposed on the tape at the rate of one beat every three seconds or, for a skilled coder, every second. The total interaction of the group is coded in separate viewings of the tape for each member of the group.

Analysis of the data in terms of causal sequences is complex. A computer program was devised to process the data. In brief, the analysis isolates those operants which are correlated with other operants during periods of operant increase. With this information it is possible to proceed to the causal analysis in terms of trimember contingen-

cies of reinforcement. This is accomplished by selecting from the correlated preceding and succeeding operants those which functionally control the emission of the increasing operant. Operants which maintain a constant rate while others are changing are regarded as exerting no causal influence: they may be considered to be conditions under which operant activity is maintained, but do not affect particular operant increases. With the removal of 'maintaining' operants, contingencies of positive and negative reinforcement are thus isolated and identified in terms of the operational definitions. As a result of this breakdown, McLeish and Martin find that the operational processes of positive and negative reinforcement, together with extinction and stimulus deprivation, account for fluctuations in the emission rates of virtually all the verbal operants in the small groups observed, coded and analyzed.

Analysis of the ways in which positive and negative reinforcement operate between members of the group pointed to the possibility of several different kinds of relationships. Nine possible relationships were identified, based on pairwise combinations, and the initiating or receiving of positive or negative reinforcement. A typology of reinforcing pairs emerged in the four different groups tested. The typologies were hypothesized as exerting various degrees of 'control-influence' in a dynamic environment.

Further reclassification of the nine types into three combined relationships suggested other control patterns specific to individuals. This typology analysis was conducted as an outline for possible future research.

Both research workers (Anderson, 1972; Martin, 1973) suggest directions for future research, related to the replicating and extending of their findings. Both studies involved unstructured group learning with psychotherapy groups, and student volunteers. For the psychotherapy groups, two types of therapy were used--a 'Tavistock treatment' and a 'Gestalt treatment'. The student volunteers received Self-Analytic Training, or Direct Communication Training. The proposed study will utilize a different type of training, and an instructional environment that is more structured and organized. Comparison between this study and the Anderson (1972) and Martin (1973) studies should contribute to our knowledge of the psychology of the learning group.

4. Teacher-Effectiveness

The early 1960's have often been referred to as a period of 'innovation' in educational research, methodology, and practice in North America. While the term 'innovation' may be a misnomer, it is safe to say that a change in emphasis and direction did occur with the movement of classroom learning studies away from single-criterion to complicated

patterns of interaction. This movement towards group interaction was paralleled by a trend towards micro-criteria. Gage (1962) developed the notion of micro-effectiveness or micro-criteria as a solution to the sterile global criterion approach to the effectiveness of teachers. Attention was concentrated on the many, varied facets of their roles. Gage's idea, in brief, was to investigate the criteria of teacher effectiveness in small, specifically designed aspects of the teaching role. The rationale for the approach was that research in these areas would yield rules which apply to the role of the teacher. Eventually these could be combined to account for the actual behaviors and effectiveness of teachers with pupils in classroom situations. The concepts discussed in earlier sections of this chapter (micro-teaching, mini-courses, competency-based education, the technical skills approach) are all instances of the micro-criterion approach--the attempt to analyze teaching into limited well-defined components that can be taught, practiced, evaluated, predicted, controlled and understood. The social interaction observation techniques are also indicative of the analytic trend.

The trend towards operationalization of the affective domain in the 1970's is also seen as an innovation in teaching methodology. Acceptance of these ideas in teacher training programs has been relatively slow due to the dif-

difficulties in measurement and evaluation of the affective behaviors. As we have noted, there seems to be at least an intuitive agreement that affective behaviors in the classroom are an important variable in effective teaching.

Most of the innovations in teaching methodology are in search of effective teaching, whether it be to analyze current examples of such an act or whether it is to change or improve teaching and thus become 'more' effective. Yet the definition of effective teaching is amorphous. Although there is a consensus that learning outcomes determine whether the act of teaching has been effective, we still have not been able to agree on such issues as process, function, or organization. The state-of-the-art is that we are moving towards a working definition of effective teaching.

Gage (1973) feels that teaching is less effective than it ought to be because it requires skills, abilities, habits and powers which are possessed by only a small proportion of the adults needed as teachers. Other professions and crafts give their practitioners whole arrays of techniques, instruments, tools, devices, formulas, strategies, tactics: in teaching few such procedures are available. Gage states that each generation of teachers benefits too little from the inventions of its predecessors. What the teaching profession needs is a much more abundant and helpful supply of the 'tools of the trade'. Tools for teachers take the

form of technical skills, decision-making skills and various kinds of rules, models and aids.

If this logic is extended to research in education, we will be in a better position to define effective teaching. We need to have a complex of evaluative skills or techniques at our disposal. The more information we have regarding what actually goes on in the classroom, the closer we will be to designing environments maximally facilitative for teaching and learning.

At the level of a single experiment, or experiments by an individual research worker, this means the application of more than one style of research in the design and subsequent analysis of the data. The three styles currently at our disposal are: experimental, correlational, and process-descriptive. Each yields different but related information, and answers a set of different, but related questions.

Gage (1972) and Rosenshine and Furst (1973) support this comprehensive- or macro-approach to research. Rosenshine and Furst suggest that at the level of area research, data banks, materials banks and test banks should be available to assist research workers in the conduct of empirical studies. The banks would make it possible to begin the sharing of ideas and the cooperation of psychologists, curriculum developers and classroom research workers. This

cumulative knowledge base, according to Rosenshine and Furst, would provide the tools "which system developers and teacher educators can use to validate and refine their 'shoulds'.

The closing remarks of Rosenshine and Furst (1973) reflect the current dilemma in the study of teaching:

It is possible that the patterns of effective teaching for different ends are so idiosyncratic that they will never be isolated; it is possible that studying teaching in natural settings is unproductive because the settings are not functional for the desired outcomes; it is possible that descriptive systems and research within the descriptive-correlational-experimental loop will be unproductive; it is also possible that linear and nonlinear curriculum approaches and the monitoring of these approaches will be unproductive. At the moment there has not been enough research to make any firm statement about any of these concerns.

(p. 175)

CHAPTER III

METHOD

Overview of Study

The study concentrated on the teaching of essential communication skills in the affective domain to education students in their graduating year. These skills were to be learned in the context of a simulated classroom environment emphasizing cognitive functions as well as psychomotor skills. This laboratory structure provided a sheltered environment wherein student-teachers could acquire and use the target skills effectively (appropriately) in a variety of classroom situations.

Skills clusters: Four skill clusters formed the framework for the affective communications skills repertoire. These skill clusters were labelled: (1) basic attending behaviors; (2) selective listening skills (skills which reflect and summarize feeling and content aspects of communication); (3) facilitative skills which encourage open expression and the sharing of personal experience; (4) integrative skills which allow for the development of alternative points of view, consensus and formulation of an action plan to resolve the classroom problem, and follow-up.

Training procedure: The training procedure was presented as an instructional module. The module was organized as a credit-course lasting one semester. The elements included: lectures, group discussions, role-play, demonstrations, simulation activities, workshops, independent study and readings. The elements were integrated and presented in a systematic functional order. Multi-media presentations in the form of video-tapes, cassettes, films, and written materials were utilized. All written materials were contained in an instructional manual prepared for the course. The manual was systematically organized to provide an ongoing framework for class activities. It contained relevant theoretical materials and references, preparatory materials for each class meeting, short self-tests, and assignments. The student was advised to make active use of the manual.

The instructional module involved both theory and application. Theoretical aspects were treated through reference materials in the manual, and during the lectures and discussions. Application took place in an active workshop atmosphere. Preparatory materials for each workshop were contained in the manual. The workshops used a micro-training format, which included components appropriate to the acquisition of affective skills and the application of these skills in the classroom. An interactive environment

was provided in which different skill clusters were practiced, applied, observed, and criticized (in accordance with the micro-training model). Student-teachers were given the opportunity to observe and criticize their ongoing and recorded performance. Feedback was derived from self-, peer- and instructor-assessments. Individuals were encouraged to improve their effective use of the skills up to a stated criterion. A series of observation instruments were provided to each observer. Data from such instruments was the basis for feedback to the student-teacher concerned.

Two series of workshops were involved in the micro-training. The first workshops concentrated on the acquisition, development, and appropriate use of affective skills in a micro-counselling setting. The micro-counselling structure emphasized the importance of the guidance and helping function of the teacher. Feedback emphasis was on the acquisition and use of specific affective communication skills. On completion of the micro-counselling sessions, a series of workshops were held in which the student-teacher attempted to apply the affective communication skills to a micro-teaching setting. Transfer of the skills took place using a series of teaching methodologies: lecture, lecture-plus-discussion, seminar or group discussion. Feedback in the micro-teaching situation was oriented towards improving the effectiveness of the teaching act: that is, emphasis

was on the interrelationship between cognitive and affective skills in a potentially dynamic, inter-active teaching-learning environment.

Micro-Training Manual: A detailed description of the training procedure is contained in the micro-training manual (see Appendix I). The Schedule of Activities (pp 212-215) serves as an organizational index.

Subjects

The subjects in the present study were 27 education students in their graduating year. The majority of students were holders of approved degrees, and had returned to the university as B.Ed/A.D. students. Their program was of one academic-year's duration, after which they would receive the Professional Teaching Certificate issued by the Alberta Department of Education. The students were primarily secondary education majors in such diverse areas in arts and science as: biology, physical education, mathematics, english. Each student had participated in three full weeks of student teaching prior to taking the course. Each student had completed a one-half year credit course in curriculum instruction. A minority of students were enrolled in the final year of a four-year B.Ed program. All of the students were enrolled in Educational Psychology 411, a four-month credit course entitled Introduction to Guidance. Twelve sections were offered by different instructors, each

with a different orientation towards the course. The course in which the present writer assisted dealt with Affective Communication Skills in the Classroom.

Instructors

Dr J. McLeish and the present writer were the instructors in the course. The instructors shared dual responsibilities in group discussions, feedback sessions, and interaction with the group. Dr McLeish was charged with the responsibility of demonstrating the skills, and involving the group in role-play and simulations. This research worker was responsible for designing and distributing manual materials, setting up time schedules for the micro-training workshops, and pre-test/post-test lessons. Both of the instructors were familiar with the manual, and the aims of the course. We therefore tried to model for the class, by means of our interaction with them, those affective communication skills outlined in the manual. This was in addition to any specific demonstration of skill clusters. That is, we tried to create an empathic environment which would facilitate understanding and communication within the group. In addition, the two instructors offered additional workshops to volunteer students from other sections.

The Research Design (See Table I, p.62)

Two main groups were used, an Experimental Group consisting of 15 students, and a Control Group consisting of 12

Table 1
Research Design

EXPERIMENTAL VARIABLES

	GROUPS				
	E ₁ (n=6)	E ₂ (n=6)	E ₃ (n=15)	C ₁ (n=6)	C ₂ (n=12) (n=6)
I Micro-training Treatment Variables					
(1) Complete instructional module	X	X	X		
(2) Partial instructional module					
(i) Instruction manual.				X	X
(ii) One-day Workshop in Affective Communication Skills					
--mini-version of micro-counselling section of complete course					X
--pilot-version of micro-counselling section				X	
II Prior Experience with Micro-training Model					
(1) none prior to study	X	X			X
(2) unstructured introduction in previous course			X		
III Function-Performance Variable					
(1) Participant	X				
(2) Observer		X			
(3) Observer/Assessor					
(4) Participant and Observer			X	X	X
IV Dependent Variables					
(1) Pre-Test, and Post-Test lesson	X	X		X	X
(2) 16 PF Personality Questionnaire	X	X	X	X	X
(3) Multiple-Choice/True-False Test of Manual	X	X	X	X	X
(4) Written course evaluation report	X	X			

students. These groups were again subdivided into three Experimental sub-groups and two Control sub-groups. All groups received the micro-training instructional manual. They differed in terms of their exposure to the micro-training elements, and in terms of a function-performance variable.

The Experimental Group received the course module, which was conducted during the months January to April inclusive and offered for course credit. Division of this group into three sub-groups was according to their function in the micro-training workshops (see Appendix I, pp 237,252) For ease of identification, we will refer to these groups by their function or role.

(1) The Experimental Participant Group (EP) - During the Workshops, each member of this group was given the opportunity to practice the target skills according to a micro-training block of five five-minute sequences: (i) an initial attempt by the student-teacher to apply the skills in a dyadic or small group setting; (ii) immediate video-tape replay of this initial attempt, during which the student-teacher and other members of the participant group observed the interaction and recorded comments on an observation form; (iii) verbal feedback from all members of the experimental group plus the instructors (objective criticism including

reinforcement, suggestions for improvement, etc);
(iv) a second application of the skills; (v) final appraisal from all members of the experimental group plus instructors (no video-tape feedback).

(2) The Experimental Observer Group (EO) - During the Workshops, this group observed the behaviors of participants in their skill application, recorded observations and comments on assessment forms specific to the skills being practiced, did not view the video-tape replay of the first skill application in the micro-training block but instead met as a group outside of the seminar room to discuss their observations and organize their feedback, provided feedback to participant members, viewed and recorded observations of the second skill application attempt, provided immediate feedback to the participant group on this second skill application.

(3) The Experimental Observer-Assessors EOA (n=3). Two members of this group operated the video equipment. The third member noted the location of all members of the group during each skill application session, made general comments on the success or otherwise of individual workshops, and submitted this information to the instructors at the end of the session. All members of this group completed observation forms on the activities of

the member of the participant group who was currently practicing the target skill(s), and provided feedback to the participant group. The first two members of this group mentioned above were also assigned the responsibility of meeting with the observers during their conference outside the seminar room. Their function was to assist the observers in their feedback conference, a function which was shared on a rotation basis by the instructors (that is, only one member was assigned to each conference). The third member of this group was at liberty to join either the participant or the observer group, so that she either saw the video-tape replay or took part in the observer conference.

II The Control Group (C) n=12

All members of this group received the Micro-Training Manual. They all attended a one-day Workshop organized by the instructors entitled "Client-Counsellor Interaction", during which they were exposed to the four clusters of helping skills as outlined in the Appendix I pp 256-283. The Workshop was a shortened version of the Micro-counselling section of the organized course. All components were included: instructional materials, demonstrations, discussions, video-tape replays, participation and observation functions. Mini-workshops were organized for skill application and practice. These took the form of triad groups, in which each member of the group had an opportunity to

practice the skill(s) and receive feedback from the group.

(4) Control Group #1 n=6 These students had attended a course given by the instructors in the previous term (September to December). This course was an unstructured pilot attempt dealing with Affective Communication Skills in the Classroom.

(5) Control Group #2 n=6 These students had chosen, as part of their course requirements in other sections of Educational Psychology 411, the one-day workshop on Client-Counsellor Interaction conducted by Dr J. McLeish and the present writer.

Selection of Subjects

An attempt was made to select all subjects from the same relatively homogenous sample of student teachers: all students had voluntarily chosen Educational Psychology 411 as a credit course; the students were in their graduating year; all had voluntarily chosen to attend a workshop dealing with affective communication skills in the classroom conducted by Dr J. McLeish and the present writer; all subjects were informed of the nature of the study and were asked if they would like to participate in it subject to the condition that they complete the requirements which we outlined to them. This ensured that all subjects were equally motivated, and gave the instructors some assurance that pre-tests and post-tests would be possible from all students.

With the exception of the students who operated the video equipment and acted as observer/assessors, all students in the Experimental group were randomly assigned to either the Participant or the Observer Group. The third member of Experimental Group #3 arrived after the course had started and after the twelve students who had indicated a desire to complete the course requirements had been randomly assigned to groups. A special role, combining both observer and assessor functions was therefore assigned this student.

Data Base

The following response measures were taken (dependent variables). These data formed the basis for a number of analyses, to be outlined below.

(1) Pre-test/Post-test Measure - All subjects were required to present a 15-minute lesson prior to the formally organized course. The subject area, topic, and teaching methodology was the choice of the student-teacher. Basic instructions were provided each student concerning the preparation of this lesson (see Appendix 1 pp 219-223). At the conclusion of the course, the student was once again asked to re-present the lesson, ensuring that the topic was unchanged. He was, however, allowed to modify or change the methodology, organization, amount of content, etc. (see Appendix I

p. 297). These lessons were video-taped.

(2) The Sixteen Personality Factor Questionnaire (16PF) was administered to all students at the beginning of the course.

(3) A multiple-choice, true-false test based on the manual was administered after the post-test lesson. The test had been given to a small group of students as a comprehension check of important concepts in the manual prior to distribution to student-teachers in the study. The student-teachers were given no notification of the test.

(4) Participant and Observer groups in the Experimental condition were asked to prepare an evaluative report on the course.

Data Analysis

The pre-test and post-test video-tapes were analyzed by three different techniques: (1) Teacher-Effectiveness Rating Scales (Oddie, 1976); (2) Bales Interaction Analysis (1970); (3) McLeish/Martin Verbal Operant Classification (1975). Each technique involved a training period for the raters involved. Seven raters were involved in the Teacher-Effectiveness analysis; seven raters in the modified Bales analysis; and two raters in the modified McLeish/Martin analysis. Training procedures for each technique will be outlined below.

Measurement

(1) Experimental - Group comparison to reflect the effect of micro-training versus no micro-training (Experimental versus Control groups), and participant versus observer effects. Teacher-Effectiveness data were used for this comparison.

(i) Statistical technique used - Analysis of Variance on Pre -test and Difference scores.

(ii) Predictions -

$$(a) E > C \quad (E = E_1 + E_2 + E_3 \quad C = C_1 + C_2) \\ n = 15 \quad \text{vs} \quad n = 12$$

$$(b) P = 0 \quad (n=6 \quad \text{vs} \quad n=6)$$

Prediction (a) is based on significant results claimed by Allen and Ryan (1969), and Borg (1975), using micro-teaching and mini-course techniques; as well as by Ivey (1971) using micro-counselling techniques. Prediction (b) was based on positive effects for observer groups as found by McLeish, Matheson and Park (1973) and attributed to vicarious learning.

(2) Correlational - Principal component analysis and canonical correlations will be used to examine the relationship between rater judgments of teacher effectiveness as obtained in comparisons of the Teacher-Effectiveness data, the Bales data, and the 16 PF data.

These analyses will use data from 27 subjects.

(3) Process-Descriptive - Six pre-test/post-test segments were chosen as representative of good and bad examples of teaching based on the Teacher-Effectiveness data. Interaction patterns of the teacher and the group across the twelve Bales categories will be examined for possible relationships.

(4) Functional Analysis - Using the same six pre-test/post-test segments described in (3), functional relationships of the teacher and the group as a whole across the ten operant categories will be examined. These tapes will be examined in time blocks of approximately four-minutes' duration to ascertain the contingencies operating on the class environment.

(3) and (4) will take the form of case study reports.

Raters - Training Procedures

1. Teacher-Effectiveness Ratings

The Teacher-Effectiveness ratings consisted of three scales: cognitive effectiveness, affective effectiveness, and overall performance. The scales were operationally defined, and each level on the five-point scale was differentiated. (See Appendix I, pp 286-290). The Teacher-Effectiveness Ratings instrument was also used by the student-teachers in their assessment of micro-teaching performances. The operational definitions of each of the three

scales was based on information contained in the instructional manual and elaborated upon during class discussions. Student-teachers were thus equipped with specific criteria to guide their rating judgments.

Training for the raters of the pre- and post-tests followed the same format as was used to train the student-teachers. The raters were advised to become familiar with the manual, so that they were certain as to what types of teaching skills were regarded as affective, or cognitive, and the various combinations of skills which could be judged as facilitating or inhibiting learning and group interaction. The raters were also advised that they should not treat the level-differentiations as all-or-none mechanistic checklists. One of the reasons for not differentiating at half-point intervals was to avoid this pitfall. The raters were given pre-training on some of the 5-minute micro-training sequences. This exercise was to give them some practice in making objective judgments, so that over a period of time their criteria for rating a student-teacher on a given level would be constant from behavioral sequence to behavioral sequence. Most raters found it very difficult to apply the rating scale initially. They were instructed to make an initial judgment at the beginning of the sequence and one at the end. Their task when making the final judgment was to narrow the judgment down based on these gross ratings made

at different time periods, and based on notes of the teacher's performance, group interaction, etc. which they were instructed to make on the rating sheet as they viewed the tape. No final rating was to be made while the tape was running. This was a period primarily for objective observations, and descriptive comments. Evaluation was to take place for each rating scale independently. They were instructed to train themselves to think only of cognitive behaviors while rating on the cognitive scale, affective behaviors while rating on the affective scale, and inter-relationships and examples of learning when rating on the overall performance scale. They were also told that the overall performance did not consist of any known combination of the other two ratings, and that each segment of behavior was to be judged on its own merits.

After this initial training on using the scales, the raters were instructed to rate all of the pre-test tapes. They were to use the same procedure as outlined in the previous micro-training rating session. The raters were encouraged to discuss difficult judgments with this research worker, who was intimately familiar with the tapes. The strategy followed in resolving difficulties was to isolate the two points on the scale within which interval the performance was judged to lie. Through a consensus, the final judgment was made. No subjective criterion was suggested

to the rater; rather, the rater was allowed to make his own decision based on additional objective observations.

Once the pre-test segments had been rated, the raters were asked to take a break from coding, during which time they were requested to re-read the manual in preparation for coding the post-tests. The post-test tapes were then coded. Fewer problems were encountered in this session, and the tapes took less time to complete.

This completed the training sequence. Final rating, on which the experimental analysis for this study was based, took place approximately ten days after the post-test training. For this final taping, the 54 segments of behavior (pre-test and post-tests) were retaped in a randomized order. Raters viewed the tapes in differential orders. They were instructed to complete the final ratings in approximately one-week's time. They were advised to space the tapes over that period of time to avoid fatigue effects. The decision to train the raters on the same tapes as they would encounter in the final rating sessions was to avoid the 'halo effect' of a particular student-teacher, or a particularly novel subject area.

Raters. Seven raters completed the above training program. Three of the raters, including the present writer, had been involved in the administration of the micro-training module to the experimental group. The remaining four raters had no working experience with the instructional module prior to receiving training.

Training Efficacy. Table 2 shows three correlation matrices, which can be interpreted as evidence that the training program had a positive effect amongst the raters in the development of a consensus on their individual judgments of 'teacher effectiveness'. Since the raters used operationally defined rating scales, it can be assumed that the raters were able to transfer these criterion references to the assessment of teacher performance.

If we examine the three matrices, we notice that initial training on the pre-test tapes yielded correlations of low positive, zero, and low negative values. The range of correlations was from -0.282 to 0.271. The change from these low correlations to the positive correlations (range of 0.171 to 0.856) on ratings from the post-tests seems to indicate that the raters benefitted from re-reading the teacher-effectiveness definitions and criterion levels, and also from referring back to the descriptions of cognitive or instructional skills, and the affective skills as contained in the manual. The small group discussions with this research worker indicated that many problems of interpretation and ambiguity were resolved, and this positive experience is assumed to have also contributed to the improvement in consensus. The third correlation matrix represents correlations yielded in the actual or post-training randomized ratings. In contrast to the pre-test and post-test training sequence, this final rating represents 162 observations as compared to 81 observations in the individual pre- and post-test sessions. Further improvement is noted in this final rating

in the more restricted range of correlations, and in the general improvement between raters. This improvement can be attributed to practice in rating, the benefit of discussions with this research worker, and the elimination of a 'halo effect' specific to subject area, novelty of approach, or personality aspects of the student-teacher and the diverse effects of this variable interacting with the unique characteristics (experience, personality, etc) of the raters. The raters had in fact learned to become more objective in their behavioral observations.

In summary, it appears that the training program designed for raters using the Teacher Effectiveness instrument had an overall effect of improving the agreement between raters on teacher effectiveness judgments.

2. Bales Training

A modified Bales' training was instituted. The raters had been solicited from a group of graduate students who had taken a course together in a prior session dealing with social learning in education. This course had included theory and application involving the Bales' system. Each of the raters had completed a study using the Bales' system to analyze the data.

As an orientation towards this study, this writer met with the raters in groups of two or three. The micro-training model was explained in some detail, and several

sequences of the micro-counselling and micro-teaching segments of behavior were shown to familiarize the group with the skill clusters taught, and the teaching methodologies to which they were applied. The group underwent a brainstorming session on perceived differences between Bales' coding in a micro-training session, and especially the micro-teaching sessions, and Bales' coding in a therapeutic session. The raters had received their Bales' training using tapes and transcripts of a predominantly therapeutic orientation. Their projects had also revolved around unstructured, therapy situations. It is also the case that the Bales' system was conceived for use in a therapy environment and that most applications have therefore been applied to this setting. Anderson (1972) claims that his study was the first one applied to an instructional situation, albeit an unstructured one. The present group met on two occasions, discussing the Bales' system and how it could be translated into instructional terms. The raters were then instructed to work together in pairs on one of the tapes, which was designated a criterion or training tape (see p. 80 for details of this pairwise methodology).

Table 3 is a principal components analysis applied to the Bales' Training tape. Raters #1 to #5 are the five permanent raters who analyzed the data. Raters #6 and #7 represent the ratings of the instructors (Dr J. Mcleish and this

TABLE 3
Principal Components Analysis
Bales' Training

Correlations for Seven Raters

	1	2	3	4	5	6	7
1	1.0	0.942	0.784	0.789	0.929	0.993	0.563
2		1.0	0.900	0.945	0.985	0.941	0.781
3			1.0	0.955	0.884	0.809	0.939
4				1.0	0.940	0.794	0.927
5					1.0	0.912	0.755
6						1.0	0.596
7							1.0

Estimated Communalities

.838	.982	.911	.933	.953	.850	.711
------	------	------	------	------	------	------

First Factor

.916	.991	.954	.966	.976	.922	.843
------	------	------	------	------	------	------

% Variance - 88

research worker respectively). The instructors rated the training tape as a means of validating the training procedures. The Table reflects the validity of the training, but also shows the range or diversity present at the beginning of training.

Table A, Appendix II shows the correlations between pairs of raters for the Pre-Test and Post-Test tapes. The column headed 'rater pair', identifies the two raters coding the micro-lesson. For example, in the pre-test lesson of subject #1, this tape was coded by raters #4 and #3. It is obvious from the data that the raters benefited from their prior training. The pairwise correlations in Table 4 are well above the .80 criterion set for the training tapes. Referring back to Table 3, this analysis lists the estimated communalities for each of the seven raters, and the first factor saturations based on these communalities. This factor, assumed to reflect the agreement due to the effects of training, accounts for 88 per cent of the variance, the remaining variance presumably being due to specific differences in experience, and to random error.

Pairwise data ratings: Varying time commitments were obtained from the raters due to their academic and domestic responsibilities. It was clear that a decision had to be made at an early stage on the rating schedules. Two alternatives presented themselves: (i) all raters would code a

minimum number of identical tapes, or (ii) pairs of raters would code all of the tapes. The decision was made to have each tape coded by a pair of raters arbitrarily formed from the pool of five raters who committed themselves to the Bales' analysis. Each micro-lesson was to be coded independently by each member of the pair. To start the system operating initially, each rater coded two segments of behavior. They were then instructed to code independently the same segment of behavior which another rater had coded. A Pearson correlation co-efficient was to be taken across the twelve Bales' categories for these two ratings. If a criterion correlation of .80 was reached, the raters could rate or validate another tape. If the criterion level was not reached, the pair of raters were to view the tape again, discussing reasons why the categories differed, and trying to establish very specific examples for the Bales' categories as applied to the instructional setting. The raters were advised to refer to the Bales (1970) textbook to ensure that interpretation of categories was accurate. Having isolated possible reasons for their discrepancies, the raters would then re-code the tape again independently. If the criterion was still not reached on this second coding attempt, another coding was undertaken. Initially, several codings were necessary before a pair reached the criterion level. Training was benefited by the group discussions, in which

this research worker participated, and during which controversial issues relating to the coding system were resolved. As the ratings proceeded, less time was spent on reaching the criterion level, indeed the raters became so skilled that high correlations were reached on initial codings. Table 4 reveals that very few of the pairwise correlations fell below $r = .90$.

The decision to code all of the tapes by pairs of raters with no restrictions on the makeup of the pair other than reaching a criterion agreement, proved to be a sound one. As time progressed, the initial varying time commitments of the raters proved accurate. Table B, Appendix III shows the distribution of tapes across all possible pairwise combinations. Over 54 per cent of the tapes were coded by the same pair of raters, and these raters (#1 and #4) were members of 94 per cent of the total of pairwise ratings used in this data analysis. The correlations of this pair of raters with each other had a median of $r = .96$. Correlations obtained by other rating-pairs was also high.

Modification to the Bales Coding System - The tapes were coded to yield measures for the teacher and the group as a whole. Coding of the teacher acts was from the perspective of his acts in relation to the group as a single entity. Coding of the group acts was from the perspective of acts directed both to the teacher and to individual members of

the group. This is an important point to keep in mind, as for example, a high percentage of acts for the teacher in Category 5 - Gives Opinion, reflects the contribution of interaction from teacher to the group. A high percentage of acts for the group in this category reflects the contribution of interaction both within the group itself and from the group to the teacher.

3. McLeish/Martin Training

Two raters, one of whom was the present writer, met for six initial discussion sessions to establish criteria for using this rating scheme in an instructional setting. Both raters had taken independent reading courses from Dr. J. McLeish dealing with B. F. Skinner's book entitled Verbal Behavior (1957), and the extension of the notion of contingencies as exemplified by McLeish and Martin (1975).

During these discussion sessions, attempts were made to code segments of taped behavior at 3-second intervals. The behaviors of the teacher were recorded independently of the behaviors of the group. That is, the tape was coded twice in any one analysis. Towards the end of this training session, we were able to code extended time segments with remarkable agreement between the codings. This was due in part to the strict criteria established for the assignment of a response to a given functional category, including consensus on the salient or critical act to be recorded in any 3-second period.

The six pre- and post-tests were coded independently. Initially, the tapes were coded several times by each rater to establish intra-rater reliability.

Final ratings were checked frame by frame by this writer. No serious disagreement was uncovered in inter-rater judgments. Minor cases of disagreement were constant, and concerned interpretative decisions of a specific nature. Disagreements were carefully considered, and responsibility for final resolution taken by this research worker.

Rules for Coding. The coding of operant categories in this study was primarily governed by the salience of operant incidence within each 3-second period. That is, where more than one operant was emitted in the coding interval, the functional saliency of one operant over another determined the final categorization. The behavioral profile which results from the varying frequency counts in each category thus represents the essential operants emitted in an instructional period of fifteen minutes by a teacher and by a small group of students.

The formulation of this coding system is based on the acceptance of the general principles established by McLeish and Martin (1975):

- (a) the verbal operant categories, as defined, satisfactorily describe all the communicative behavior we have observed. Our system, based on Skinner's (1957) analysis of behavior, supplemented by Bales' (1970) affect categories, is comprehensive, functional, and operational.

- (b) the basic principles of the experimental analysis of behavior, and in particular the concepts of contingencies of reinforcement, satisfactorily account for all increases and decreases in the rates of emission of verbal operants in a group situation;
- (c) the relatively 'spontaneous' behavior of human subjects in an interacting group is under the control of the principle of causality. This is revealed only by a systematic analysis of the behavior of the participants in terms of some such complex and functional model as that provided by B. F. Skinner. (p. 4)

The operant categories are accepted as defined by McLeish and Martin (1975). The modification of the rules of coding is in keeping with the general aim of this thesis, i.e. the examination of the process and evaluation of micro-training. The isolation of salient essential operants in a behavioral sequence provides an appropriate evaluative technique by which the research worker is able to: (i) investigate the efficacy of the micro-training program, (ii) conduct a meaningful comparison with analyses proceeding from the Bales and Teacher-Effectiveness data, and (iii) outline applications of the resultant instructional findings to current and proposed educational systems.

Appendix IV provides definitions of the operant categories which comprise the McLeish/Martin (1975) Operant System for Analysis of Communicative Behavior. Appendix V outlines the Rules for Coding used in this study.

The Sixteen Personality Factor Questionnaire (16 PF) - (1970)

This questionnaire was originated and developed by Cattell in 1950, and revised in 1957. It is claimed to be of high validity and reliability. Details of several hundreds of studies conducted to test the instrument are contained in: Cattell, Eber, and Tatsuoka (1970), Handbook for the Sixteen Personality Factor Questionnaire. The 16 PF is factor-based, and yields information on sixteen source trait dimensions. Cattell claims that these source traits affect large areas of overt personality behaviors. Many research workers have used the scores obtained on this test as predictors of future performance. Low score and high score descriptions obtained from the 16 PF can be represented by the following dichotomous adjectives, each representing one of the source trait dimensions:

reserved - outgoing
 less intelligent - more intelligent
 affected by feelings - emotionally stable
 humble - assertive
 sober - happy-go-lucky
 expedient - conscientious
 shy - venturesome
 tough-minded - tender-minded
 trusting - suspicious
 practical - imaginative
 forthright - shrewd
 self-assured - apprehensive
 conservative - experimenting
 group-dependent - self-sufficient
 undisciplined self-conflict - controlled
 relaxed - tense

No hypotheses were generated a priori. This research worker was interested in the relationship between these six-

teen source traits and the teacher effectiveness ratings (cognitive, affective, and overall).

Pilot Studies

A series of micro-training workshops and laboratory experiences was conducted during the period September to mid-December, 1975. In addition, a series of six micro-training workshops was offered to interested students in other sections of Educational Psychology 411 - Introduction to Guidance. These workshops were either one day or two half-day sessions. As the workshops continued, the methodology for presenting clusters of affective skills for use in the classroom became relatively more organized and effective. Due to time restrictions, the excessive numbers of students involved in any one workshop, and difficulties in acquiring adequate facilities, we were only able to concentrate on the first two clusters of affective skills: basic helping skills, and reflection and summarization of feeling and content. The workshops consisted of: instructional materials in the form of written handouts describing the use, function, appropriate and inappropriate examples, etc., of the skills; video-taped modeling films of therapists and counsellors demonstrating the skills; and demonstration sessions on skill usage. Introductory discussions were held on the importance of: nonverbal aspects of communication, observation techniques, and relevance of affective communication skills in education. Wherever possible dyads

or triads were set up so that participants could practice the skills, observe others, and learn to provide feedback and to benefit from it. Observation instruments specific to particular skill clusters were introduced and demonstrated.

Two of the workshops represented attempts to incorporate skill clusters 3 and 4 (facilitative skills which encourage open expression and the sharing of personal experience; and integrative skills which allow for a final statement and resolution of the classroom problem), in a micro-counselling framework. This was accomplished using general descriptions of the skills, and demonstrating in an unstructured fashion the form and function of the skills.

An unstructured approach to training in micro-teaching was also established. Participants were volunteers from our own section of Educational Psychology 411. During these six 45-minute meetings, students were introduced to the concept of micro-training and the components in micro-teaching. Each of the ten volunteers was asked to present a five-minute lesson, and the rest of the group would provide feedback on areas of strength and weakness, and suggestions for improvement.

The above is a brief description of the types of pilot activities which contributed towards the design of the instructional module used in the present study. Several important findings had implications for the type of information included in the module. For example, we became

aware of the differences in entering behaviors on such issues as: instructional objectives, compilation of a lesson plan, teaching methodology, observation techniques, and the importance of the affective domain in education. A decision was therefore made to include introductory lecture sessions, as well as preparatory materials on these and other issues relating to training. We also concluded that, contrary to the contention of Ivey (1974), it was necessary to operationalize all clusters of affective skills if they were to be taught in a systematic fashion, and if the trainees were to be able to discriminate them initially, and eventually apply them to simulated role-play situations. Our experience in micro-teaching also indicated that the students needed prior instruction in different methodologies of teaching, and the uses and function of each. We also concluded that in order to apply affective skills to the instructional setting, prior training in acquisition of such skills in a micro-counselling setting was a prerequisite. Our experience also indicated the benefits to be obtained through planning, organizing, and the application of what Merrill (1971), Snelbecker (1974), Popham (1970) and others have referred to as 'instructional design techniques' in the preparation of mini-course materials. This means that systematic sequences of instructional events must include: behavioral and instructional objectives, self-tests, summarization, references, and objective examples of concepts.

CHAPTER IV

RESULTS

I Micro-training Effects - The Research Question

One of the aims of the present study was to examine the effects of various degrees of micro-training on the acquisition and appropriate usage of affective communication skills in the classroom. There were no traditional control groups, each group served as a control on all the others. Pre-test data can also be considered as control measures. Everyone in the experiment received the instructional manual as well as some form of workshop experience. During these workshops, the clusters of affective skills were discussed, demonstrated, practiced and evaluated. The basic difference between groups was a function of the structure and intensity of the instruction received, these being related to the length of time over which the training program took place.

The research question did not concern the effects of micro-training versus no microtraining. Rather the research asked such questions as: What results, if any, can be expected from the different approaches? Is it reasonable to expect positive results from minimal exposure to the program? Does the complete instructional module justify the extended time, effort, organization, and planning involved?

Limitations of the Study - It is of some importance to outline the limitations of the study in order that the research questions can be framed within a perspective reflecting reality.

One of the most limiting factors was the time element. Given only twenty-seven opportunities to meet with the class dictated that we restrict the micro-training block to a five-step instructional sequence (approximately one-half-hour of class time). This had the effect of changing the instructional module, as used in this study, away from the competency-based model which allows for unlimited cycles of the micro-training block. However, the decision to settle on a minimal use of the recursive function in the model was not due entirely to expediency, it was based on research evidence. Allen and Ryan (1969) report acquisition of various cognitive skills using a restricted cycle. Ivey (1971) reports success with his shortened workshops, and with the learning of clusters of skills as opposed to individual skills. Perhaps one of the most critical issues was to allow for integration of the micro-counselling skills, and for transfer to micro-teaching: that is, a macro-approach to micro-training (Gage, 1973).

Adherence to experimental rigor dictated that the instructors could not deviate from the initial experimental design. To have done so would have been tantamount to

eliminating the original research questions. For example, although it might have been beneficial to 'switch' the roles of participants and observers in mid-term, to focus on individual instruction, or to schedule additional workshops, such considerations could not be entertained.

Research in micro-training, as with research in small groups in general, is restricted somewhat by the problem of statistical techniques: we require methods which do not penalize small cell frequencies. The paradox of small group learning, as with individual instruction, is that the restriction of reported results to such indices as 'group means', obscures the defining characteristics of this instructional methodology. The small group research worker accepts that it is meaningful to ask questions which can be analyzed by rigorous statistical techniques. Often however, our knowledge can be advanced by the use of slightly less-sophisticated, but none-the-less valid forms of analysis. The data must therefore be analyzed by several different methods to ensure that no significant differences are obscured.

Group Comparison - Pre-test Data

In order to answer the question, which group benefited the most from training, an analysis of variance was initially used on the teacher-effectiveness data. These data comprise the cognitive, affective, and overall ratings made of pre-test and post-test micro-lessons by the seven raters.

A two-way analysis, with 'groups' as the treatment factor A, and 'repeated measures' as factor B (raters) was carried out on the pre-test data. No significant differences were found between experimental and control groups, between participant and observer groups, or between any of the five sub-groups. Homogeneity of Variance tests indicated that the basic assumption underlying the analysis of variance, i.e. that the samples are representative of the same population, was not violated. Table 4 summarizes the pre-test data.

Having ascertained that all groups proceeded virtually from the same baseline, the decision to look at differences between pre-test and post-test measures as indications of learning became tenable.

Change Scores

Table 5 gives the change score cell sums as a function of the individual raters, and sub-groups. Totals for the experimental and control groups are also given, along with group means. Table 6 gives the cell means as a function of raters, and also lists the group means. A summary of these data, showing the sums and means as a function of groups (i.e. collapsing the raters) is given in Table 7. In all cases (cognitive, affective, and overall effectiveness) the gains made by the experimental group exceed the control group by a ratio of 3.8:1. The ratio of gains in cognitive

TABLE 4

Pre-Test Scores - Teacher Effectiveness
Cognitive - Affective - Overall
Cell Means as a Function of Raters; Group Means

Measure	n	R a t e r s							Group Means
		1	2	3	4	5	6	7	
Cognitive Experimental	E 1	3.33	3.50	3.50	3.33	3.33	3.00	3.00	3.28
	E 2	3.25	2.83	3.25	3.08	3.00	2.75	2.58	2.96
	E 3	2.83	3.00	3.33	3.00	2.83	2.83	2.67	2.93
	Means	3.20	3.13	3.37	3.17	3.10	2.87	2.77	3.08
	Control								
Affective Experimental	C 1	3.50	3.25	3.58	3.25	3.33	3.17	3.25	3.33
	C 2	3.25	3.00	3.25	3.42	3.00	3.00	3.08	3.14
	Means	3.37	3.12	3.42	3.33	3.17	3.08	3.17	3.24
	E 1	3.25	3.00	3.42	3.08	3.42	3.00	3.08	3.17
	E 2	3.08	2.92	3.00	2.83	2.67	2.83	3.08	2.92
Overall Experimental	E 3	3.17	3.00	3.00	3.00	3.00	2.67	3.17	3.00
	Means	3.17	2.97	3.17	2.97	3.03	2.87	3.10	3.04
	Control								
	C 1	3.17	3.25	3.08	2.92	3.00	3.17	3.58	3.17
	C 2	3.08	2.67	3.00	3.17	3.17	3.17	3.25	3.07
Overall Experimental	Means	3.12	2.96	3.04	3.04	3.08	3.17	3.42	3.12
	E 1	3.25	3.25	3.50	3.25	3.41	3.25	3.08	3.28
	E 2	3.17	2.83	3.08	3.00	2.92	2.83	2.75	2.94
	E 3	3.00	3.00	3.33	3.00	3.00	3.00	2.83	3.02
	Means	3.17	3.03	3.30	3.10	3.13	3.03	2.90	3.09
Overall Experimental	Control								
	C 1	3.33	3.25	3.25	3.08	3.08	3.33	3.25	3.23
	C 2	3.17	2.92	3.00	3.25	3.17	3.33	3.17	3.14
	Means	3.25	3.08	3.12	3.17	3.12	3.33	3.21	3.18

TABLE 5

Change Scores - Teacher Effectiveness
Cognitive - Affective - Overall
Cell Sums as a Function of Raters; Group Means

Measure	n	R a t e r s							Total	Group Means
		1	2	3	4	5	6	7		
<u>Cognitive</u>										
<u>Experimental</u>										
E 1	6	4.0	1.0	1.5	2.0	4.0	0.5	3.5	16.5	0.39
E 2	6	2.5	1.5	1.0	2.0	3.5	1.5	5.0	17.0	0.40
E 3	3	2.0	1.5	0.5	1.5	2.0	0.5	2.0	10.0	0.48
E Total	15	8.5	4.0	3.0	5.5	9.5	2.5	10.5	43.5	0.42
<u>Control</u>										
C 1	6	0.5	0.5	-1.0	1.5	0.5	0.5	0.0	2.5	0.06
C 2	6	1.0	-1.0	-0.5	2.0	1.0	0.0	3.0	5.5	0.13
C Total	12	1.5	-0.5	-1.5	3.5	1.5	0.5	3.0	8.0	0.09
<u>Affective</u>										
<u>Experimental</u>										
E 1	6	4.5	2.5	1.0	3.5	3.5	1.0	5.0	21.0	0.50
E 2	6	1.0	0.5	2.0	2.5	5.0	2.5	4.0	17.5	0.42
E 3	3	1.5	1.0	1.0	1.5	1.0	0.5	1.5	8.0	0.38
E Total	15	7.0	4.0	4.0	7.5	9.5	4.0	10.5	46.5	0.44
<u>Control</u>										
C 1	6	0.5	-0.5	0.0	0.0	1.0	-1.5	-1.5	-2.0	-0.05
C 2	6	2.0	1.5	-1.5	2.5	-0.5	1.0	6.0	11.0	0.26
C Total	12	2.5	1.0	-1.5	2.5	0.5	-0.5	4.5	9.0	0.10
<u>Overall</u>										
<u>Experimental</u>										
E 1	6	4.5	2.0	2.5	2.0	3.5	0.0	2.5	17.0	0.40
E 2	6	3.0	1.0	2.5	2.0	3.0	2.5	5.5	19.5	0.46
E 3	3	1.5	1.5	0.5	1.5	1.5	0.5	2.0	9.0	0.43
E Total	15	9.0	4.5	5.5	5.5	8.0	3.0	10.0	45.5	0.43
<u>Control</u>										
C 1	6	0.5	-0.5	0.0	0.5	0.5	0.5	0.5	2.0	0.05
C 2	6	1.5	0.5	0.0	2.0	0.5	0.5	5.5	10.5	0.25
C Total	12	2.0	0.0	0.0	2.5	1.0	1.0	6.0	12.5	0.15

TABLE 6

Change Scores - Teacher Effectiveness
Cognitive - Affective - Overall
Cell Means as a Function of Raters; Group Means

Measure	n	R a t e r s							Group Means
		1	2	3	4	5	6	7	
<u>Cognitive</u> <u>Experimental</u>									
E 1	6	0.67	0.17	0.25	0.33	0.67	0.08	0.58	0.39
E 2	6	0.42	0.25	0.17	0.33	0.58	0.25	0.83	0.40
E 3	3	0.67	0.50	0.17	0.50	0.67	0.17	0.67	0.48
Means	15	0.57	0.27	0.20	0.37	0.63	0.17	0.70	0.42
Control									
C 1	6	0.08	0.08	-0.17	0.25	0.08	0.08	0.00	0.06
C 2	6	0.17	-0.17	-0.08	0.33	0.17	0.00	0.50	0.13
Means	12	0.13	-0.04	-0.13	0.29	0.13	0.04	0.25	0.09
<u>Affective</u> <u>Experimental</u>									
E 1	6	0.75	0.42	0.17	0.58	0.58	0.17	0.83	0.50
E 2	6	0.17	0.08	0.33	0.42	0.83	0.42	0.67	0.42
E 3	3	0.50	0.33	0.33	0.50	0.33	0.17	0.50	0.38
Means	15	0.47	0.27	0.27	0.50	0.63	0.27	0.70	0.44
Control									
C 1	6	0.08	-0.08	0.00	0.00	0.17	-0.25	-0.25	-0.05
C 2	6	0.33	0.25	-0.25	0.42	0.08	0.17	1.00	0.26
Means	12	0.21	0.08	-0.13	0.21	0.04	-0.04	0.38	0.10
<u>Overall</u> <u>Experimental</u>									
E 1	6	0.75	0.33	0.42	0.33	0.58	0.00	0.42	0.40
E 2	6	0.50	0.17	0.42	0.33	0.50	0.42	0.92	0.46
E 3	3	0.50	0.50	0.17	0.50	0.50	0.17	0.67	0.43
Means	15	0.60	0.30	0.37	0.37	0.53	0.20	0.67	0.43
Control									
C 1	6	0.08	-0.08	0.00	0.08	0.08	0.08	0.08	0.05
C 2	6	0.25	0.08	0.00	0.33	0.08	0.08	0.92	0.25
Means	12	0.17	0.00	0.00	0.21	0.08	0.08	0.50	0.15

TABLE 7

Comparison - Change Scores - Teacher Effectiveness
 Experimental vs Control
 Mean Group Gains

<u>Measure</u>	<u>Experimental</u>		<u>Control</u>	
Cognitive	E 1	.39	C 1	.06
	E 2	.40	C 2	.13
	E 3	.48		
	E	<u>.42</u>	C	<u>.09</u>
Affective	E 1	.50	C 1	-.05
	E 2	.42	C 2	.26
	E 3	.38		
	E	<u>.44</u>		<u>.10</u>
Overall	E 1	.40	C 1	.05
	E 2	.46	C 2	.25
	E 3	.43		
	E	<u>.43</u>	C	<u>.15</u>

effectiveness is 4.67:1, for affective 4.4:1, and for overall 2.87:1.

The effects of the complete micro-training instructional module on the development of affective communication skills and their application to teaching methodology seem to be clearly demonstrated. This is evidenced by the fact that the experimental group shows a significantly better performance than the control group in the cognitive and the overall effectiveness areas.

A rank ordering of the mean gain scores for each of the sub-groups is contained below:

<u>Cognitive</u>	<u>Affective</u>	<u>Overall</u>
E3	E1	E2
E2	E2	E3
E1	E3	E1
C2	C2	C2
C1	C1	C1

Here we see the differential nature of the gains in teacher-effectiveness appearing as a function presumably of micro-training variations. The control group shows a constant rank ordering across scales in favour of C2 treatment. In terms of cognitive effectiveness, the observer/assessor group was most effective, followed by the observer and participant groups. These results support the vicarious learning hypothesis in the acquisition of cognitive skills. In the affective area also there appears to be evidence for the vicarious learning ascribed to the observer role.

The participant group benefitted the most from the treatment, followed by the observer group and the assessor/observer group. But the differences are quite small--at most only about one-tenth of a scale division.

A two-factor analysis of variance, with repeated measures on the rater factor was applied to the change score data. Results are contained in Table 8. There is a significant effect in favour of the experimental group across the cognitive, affective, and overall dimensions of teacher-effectiveness. There is also a significant main effect for raters, but no interaction between raters and groups indicating that the difference between raters is a quantitative one rather than qualitative. That is, each rater clearly differentiated between groups. They were not agreed, however, on the size of the scale unit which governed their judgment.

Acquisition and Improvement versus Remediation

It is of some interest to know whether the poor student benefits more from the treatment than the good student. If for example, the better teachers in the group are shown to deteriorate or even remain the same more than they improve, then we can say that the instructional module was not designed to allow for individual differences. That is, perhaps there is reason to suspect that the module is better applied to a remedial skills program than one of acquisition and improvement.

TABLE 8

Summaries of Analysis of Variance¹
 Change Scores - Teacher Effectiveness
 Cognitive - Affective - Overall
Experimental vs Control (n=15 vs 12)

<u>Source</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>P</u>
<u>1. Cognitive</u>				
Between Subjects	26			
A - Exp vs Control	1	4.750	7.243	0.01*
Subjs within gps	25			
Within Subjects	162			
B - Raters	6	0.746	3.647	0.002*
A x B Interaction	6	0.184	0.898	0.49
B x Subj within Gps	150	0.205		
<u>2. Affective</u>				
Between Subjects	26			
A - Exp vs Control	1	5.260	4.887	0.03*
Subjs within gps	25	1.076		
Within Subjects	162			
B - Raters	6	0.716	2.885	0.01*
A x B Interaction	6	0.112	0.451	0.84
B x Subj within Gps	150	0.248		
<u>3. Overall</u>				
Between Subjects	26			
A - Exp vs Control	1	3.778	4.266	0.04*
Subjs within gps	25			
Within Subjects	162			
B - Raters	6	0.658	3.461	0.003*
A x B Interaction	6	0.127	0.669	0.674
B x Subj within Gps	150	0.190		

* $p \leq .05$ level of significance

¹ Two-Factor Analysis of Variance with Repeated Measures on Factor B

On the basis of pre-test scores obtained on the Teacher-Effectiveness Data, the twenty-seven student-teachers were rank-ordered and equally divided into two categories of teachers: good, and poor. A frequency count was then taken as to whether they improved or whether they deteriorated or remained the same in their post-test performance. This was done in all three domains of teacher-effectiveness. Table 9 shows the resultant contingency tables. Non-significant chi-squares were yielded in all analyses, suggesting that the good teachers benefited as much from the program as did the poor teachers. This is very encouraging: it indicates that the good student need not become bored or discouraged during micro-training because he feels he cannot improve. The module assumes that the instruction will benefit all, given that the student-teacher is actively involved in the program.

Course Evaluation Assignment

As part of the course requirements, the participants and observers in the experimental group were asked to evaluate the course. These evaluations were to be submitted in written form. They were expected to yield an objective measure of facility in using affective communication skills in written as opposed to spoken discourse.

A content analysis was carried out on these written assignments, according to the following procedure. The data base consisted of a frequency count of all positive and nega-

TABLE 9

Contingency Tables
Effects of Micro-Training on Pre-Test Classification
(Good, and Poor Student-Teachers)

1. Cognitive

	+	-	
Good	8	5	13
Poor	11	3	14
	19	8	27

$$\chi^2 = .3$$

Non-significant

2. Affective

	+	-	
Good	9	5	14
Poor	10	3	13
	19	8	27

$$\chi^2 = .0002$$

Non-significant

3. Overall

	+	-	
Good	10	3	13
Poor	10	4	14
	20	7	27

$$\chi^2 = .01$$

Non-significant

+ Improved
- Remained the same, or
Deteriorated

tive evaluative statements in both the cognitive and affective area. Cognitive statements would include such items as: structure and organization of the manual, workshops, and demonstrations; instructional objectives; application of the affective communication skills during student-teaching. Affective statements included the description of feelings experienced and observed.

An evaluative statement consisted of either judgments or suggestions. Positive evaluative judgments were scored positive, and negative evaluative judgments were scored negative. Negative evaluative suggestions relating to negative evaluative judgments were recorded as a minus (-). However, positive evaluative suggestions relating to a negative evaluative judgment were recorded as a plus (+). This procedure resulted in an overall positive or negative value attributed to the cognitive and affective evaluations. It was hypothesized that a positive value score showed evidence of transfer of the micro-training in affective communication skills to written discourse. That is, as in spoken discourse, communication which accurately reflects the feelings and content, and in addition presents alternative opinions and suggestions for improvement, is of high positive value.

In categorizing the evaluative statements as either positive or negative, it was important that the evaluator not become personally involved in 'validity' decisions. That is,

whether a positive or negative statement was true or false was to have no effect on judgments of potential value of the evaluative suggestions. To avoid experimenter bias an independent evaluator (not previously connected with the experiment) was selected to conduct the analysis.

In training the evaluator, familiarity with the instructional module was important, inasmuch as interpretation of the written assignments depended to some extent on knowledge of the content of the manual and of the design of the micro-training events. The evaluator was therefore given the instructional manual to read. An informal discussion was held to acquaint him with the design and to answer any of his questions. The written assignments were then given to the evaluator with instructions that he read each one. After so doing, the procedure for allocating evaluative statements to categories was outlined, and the evaluator conducted the analysis in accordance with these procedures.

In addition to the basic procedures for coding outlined above, the following rules were also observed. All evaluative judgments which were repetitions or elaborations of initial evaluative judgments were disregarded. However, all evaluative suggestions relating to an initial judgment were tallied. No structural or grammatical restrictions were placed on the unit of analysis. This rule accommodated the differences between a sentence which contained two evaluative

suggestions or judgments, and a paragraph containing only one suggestion or judgment. Extended summaries, references to content of the manual, inclusion of outside references introduced as supportive arguments or discussions, were considered to be non-evaluative statements and as such did not contribute to the frequency count. If, in the course of such neutral statements, a positive or negative statement relating to the course occurred, such a statement would be tallied in the frequency count.

This research worker was available for consultation regarding any judgments which the evaluator found difficult to classify. The completed analysis was checked by this research worker and judged to be accurate and in keeping with the criterion rules.

Table 10 lists the contingencies comparing the frequencies of evaluative statements made by participants and observers. The χ^2 analyses examining the differences between cognitive, affective, and combined comments for participant and observer groups were all significant.

The analyses suggest that the participant group learned how to transfer the effective use of affective communication skills to written discourse. The observer group, especially in the affective area, did not apply the skills of presenting alternative points of view and suggestions for improvement in their evaluations. The observer group did not neglect to

TABLE 10

Contingency Tables (χ^2)
 Evaluative Assignment
Positive/Negative Value

1. Cognitive Comments
 Participant vs Observer

	+	-		
P	275	80	355	$\chi^2 = 8.06^* \text{ d.f.} = 1$ $* \underline{p} \leq .01$
O	179	90	269	
	454	170	624	

2. Affective Comments
 Participant vs Observer

	+	-		
P	56	46	102	$\chi^2 = 4.03^* \text{ d.f.} = 1$ $* \underline{p} \leq .025$
O	55	81	136	
	111	127	238	

3. Cognitive Plus Affective Comments
 Participant vs Observer

	+	-		
P	331	126	457	$\chi^2 = 19.76^* \text{ d.f.} = 1$ $* \underline{p} \leq .01$
O	234	171	405	
	565	297	862	

offer positive value statements, as the tables indicate. Their weakness, compared to the participant group, lay more in dealing with problems of negative affective and cognitive connotation.

Summary

Two general predictions regarding treatment effects were made previously. The first prediction, that there would be significant differences between the experimental and control groups was realized. The second prediction, that there would be no differences in performance between participant and observer groups was verified.

A summary of relevant findings in the various data analyses follows:

There were no differences between the control and experimental groups on the pre-test data. Using analyses of variance, the experimental group was significantly different from the control group using change scores derived from seven raters. No differences were found between subgroups in the experimental and control groups.

Analysis of the course evaluation assignment shows a significant difference in favour of the participant group in terms of increases in positive affective and positive cognitive value statements, and decreases in negative

statements. Results indicate that the observer group was not able to transfer the affective communication skills to written discourse as well as the participant group.

Results support the beneficial effects of a systematic, operationalized skills approach to training, with the experimental group showing an increase in skill approximately four times that of the control group.

II Teacher Effectiveness

One of the aims of this study was to investigate the problem of teacher-effectiveness. Although the inter-relations of sets of data are of interest, it is of greater concern that the subsequent interpretations should lead us towards a more objective, behaviorally-oriented understanding of what constitutes teacher-effectiveness.

Three data sets were available for analysis: teacher-effectiveness data consisting of scale scores on three dimensions (cognitive, affective, and overall); 16 PF data, consisting of scores on sixteen independent personality factors; and a Bales' Interaction Process Analysis, consisting of twelve categories reflecting the affective or the task dimensions of social interaction. Pre-test and post-test data were available for the Teacher-Effectiveness and

and Bales data sets. The 16 PF data were collected only once.

A canonical correlation analysis was made of the Bales pre-test and post-test data combined, and of the Teacher-Effectiveness data, pre-test and post-test data combined. The variables in the Bales data were the twelve categories of social interaction. The variables in the Teacher-Effectiveness data were the judgments of the seven raters. We were especially interested, of course, in those variables in each set which were maximally correlated. Canonical analyses were carried out separately for each of the three scales in the Teacher-Effectiveness data. These analyses will be referred to as: (1) Cognitive-Bales Canonical analysis (2) Affective-Bales Canonical analysis and (3) Overall-Bales Canonical analysis.

(1) Cognitive - Bales Canonical Analysis

The question this analysis addresses itself to is: To what extent is cognitive teacher-effectiveness, as judged by seven raters, maximally related to social interaction patterns as defined by the Bales' categories? Table 11 shows the canonical correlations between each pair of composites formed from the Cognitive teacher-effectiveness data set and the

TABLE 11

Canonical Analysis
Cognitive - Bales

Canonical Correlation between each pair of new composites

0.787 0.624 0.521 0.464 0.373 0.265 0.102

Bartlett's Lambda Test

<u>Roots</u>	<u>Chi Square</u>	<u>DF</u>	<u>Probability</u>
1- 7	99.022	84	0.126
2- 7	56.502	66	0.791
3- 7	34.832	50	0.949
4- 7	20 901	36	0.979
5- 7	10.243	24	0.993
6- 7	3.656	14	0.997
7- 7	0.462	6	0.998

First Canonical Variate - Non-significant

Bales data set. These values, when squared are the eigenvalues used in the calculations of normalized weights for data sets A and B. The canonical correlation attempts to find if the two sets are related through using the first value in the set of roots (eigenvalues), i.e. the largest squared canonical correlation. If the resultant Chi-Square analysis (Bartlett's Lambda test) on data transformed by this first canonical variate is not significant, then the conclusion must be drawn that there are no significant ways in which the two sets of data are related. Table 11 shows that the Lambda test rejects the hypothesis that the two sets of data are related in any significant way.

(2) Affective-Bales Canonical Analysis

Table 12 lists the relevant data connected with this canonical analysis. The Lambda test indicates that the canonical variate on the first root is significant at the .001 level of significance. After the first pair of canonical variates are determined, however, no further significant combinations exist. The maximum possible correlation of the composite pair for the canonical correlation on the first variate is 0.820. The percentage of variance extracted by the first variate in Set A (raters) is 82.6 per cent, and by the first variate in set B is 56.9 per cent.

To interpret a cononical analysis, one examines the relative magnitudes and signs of the several combining weights

TABLE 12

Canonical Analysis
Affective-Bales

Canonical Correlation between each pair of new composites

0.820* 0.691 0.631 0.565 0.403 0.321 0.174

Bartlett's Lambda Test

<u>Roots</u>	<u>Chi-Square</u>	<u>DF</u>	<u>Prob</u>
1- 7	130.811	84	0.001*
2- 7	81.793	66	0.091
3- 7	53.290	50	0.349
4- 7	30.915	36	0.709
5- 7	13.961	24	0.948
6- 7	6.150	14	0.963
7- 7	1.361	6	0.968

First Canonical Variate

Raters	.929	.713	.698	.782	.835	.649	.414
Bales	.444	.402	.377	.676	-.031	-.059	.484
	.195	.215	.537	-.121	-.273		

Proportion of Variance
of Variables Extracted
by 1st root

% of Variance Expl.
by Canonical
Correlation*

Raters	.537	82.6
Bales	.138	56.9

defining each canonical variate, to see if a meaningful psychological interpretation can be given. Since in this analysis, only the first canonical variates can be considered, these become the basis of the interpretation (see Table 12).

A possible interpretation of the data (as outlined by Cooley & Lohnes, 1962, p. 44, and Tatsuoakas, 1971, p. 190) follows. The judgments of affective teacher-effectiveness appear to be related in a significant way to a combination of social interaction acts emitted by the teacher described as: appearing friendly, giving suggestions, asking for information, dramatizing (which includes humour), expressing agreement, and expressing disagreement.

(3) Overall - Bales Canonical Analysis

The first canonical variate accounted for 68 per cent of the rater variance in the corresponding value of the canonical correlation and 63 per cent of the Bales variance. The first value in the canonical correlation represents an intercorrelation of .83 between composite pairs in set A and B (see Table 13). The Bartlett's Lambda test is significant at the .001 level on the first canonical composite, indicating that there is one significant way in which the two domains (overall teacher-effectiveness and interaction analysis patterns) are related. None of the other composite pairs are significant.

A possible interpretation of the first canonical variates

TABLE 13

Canonical Analysis
Overall - Bales

Canonical Correlation between each pair of new composites

0.837* 0.682 0.588 0.516 0.485 0.289 0.174

Bartlett's Lambda Test

<u>Roots</u>	<u>Chi-Square</u>	<u>DF</u>	<u>Prob</u>
1- 7	129.895	84	0.001*
2- 7	76.793	66	0.171
3- 7	49.254	50	0.503
4- 7	30.561	36	0.725
5- 7	16.958	24	0.850
6- 7	5.183	14	0.983
7- 7	1.355	6	0.969

First Canonical Variate

Raters	.812	.767	.488	.644	.691	.424	.242
Bales	.262	.227	.425	.641	-.086	.085	.551
	.251	.450	.619	.108	.153		

Proportion of Variance
of Variables Extracted
by 1st root

% of Variance Explained
by Canonical Correlation*

Raters	.374	68.9
Bales	.143	63.3

(see Table 13) follows. The judgments on overall teacher-effectiveness are related to a combination of the following social interaction acts emitted by the teacher: gives suggestions, and asks for suggestions, asks for information, expresses disagreement and agreement.

The interpretation of these three canonical analyses are substantiated by an examination of the inter-correlation matrix (Bales x teacher-effectiveness) in which the social interaction acts seems friendly, dramatizes, and gives suggestion are the top three rank-ordered correlations across all teacher-effectiveness domains. Asking for information, disagreement, and agreement were rated next in importance in the overall and affective domains. The next three in rank order in the cognitive domain are, asks information, expresses disagreement and asks for suggestions.

(4) Inter-relations - Teacher Effectiveness Data and 16 PF Data

Canonical correlations were also carried out on the Teacher-Effectiveness Data and the 16 PF Data. The three variables for the first set of data were the averaged cognitive, affective, and overall scores. The variables for the second set were the 16 personality factors. Six canonicals were carried out, one for each pre-test and post-test. None of these analyses were significant. However, an examination of the bivariate relations within the correlation matrix for these two sets of data can provide a rough index

of possible relationships. Table 14 shows a rank ordering of the 16 PF variables for each of the cognitive, affective and overall domains for both pre-test and post-test data.

In the pre-test data, the teacher rated high in the cognitive, affective, and overall scales appears to possess a combination of two or more of the following personality traits: outgoing, trusting, assertive, conservative, above-average intelligence, and venturesome. This is followed by self-sufficiency and forthrightness in the affective domain, emotional stability and self-sufficiency in the overall domain, and happy-go-lucky and forthrightness in the cognitive domain. It is important to note that six of the first seven rank-ordered 16 PF traits were ranked of equal importance across all teacher-effectiveness domains.

For the post-test data, three personality traits were common to the first six rank orders: outgoing, assertive, and forthright. In the first seven rank orders, the traits of trusting, and self-sufficiency emerge; and in the first eight rank-orders, venturesome and practicality emerge.

The post-test rank-ordering of the first six common factors has changed somewhat. Both pre-test and post-test agree on the personality factors of outgoing, trusting assertiveness and venturesomeness. However, in place of conservativeness and intelligence, the post-test now shows forthrightness, self-sufficiency and practicality. This suggests that in this study the effective teacher tended to

TABLE 14

Pre-test and Post-test Rank Ordering of Correlations
Between 16 PF and Teacher Effectiveness Data

(a) Pre-test

Rank Order	Cognitive		Affective		Overall	
	16PF	r	16PF	r	16PF	r
1	1	.61	1	.519	1	.545
2	9	-.505	9	-.401	9	-.481
3	7	.398	4	.293	4	.373
4	4	.338	2	.286	12	-.318
5	12	-.335	12	-.248	7	.259
6	2	.292	14	.214	2	.225
7	5	.171	7	.188	3	.143
8	11	-.154	11	-.152	14	.138
9	15	-.129	15	-.110	5	.117
10	8	-.125	6	-.094	16	-.109
11	13	-.106	16	-.090	11	-.101
12	3	.07	3	.070	15	-.089
13	16	-.050	5	.068	8	-.069
14	14	.029	13	-.051	10	-.045
15	10	-.020	8	.036	13	-.032
16	6	-.012	10	.022	6	-.007

(b) Post-test

Rank Order	Cognitive		Affective		Overall	
	16PF	r	16PF	r	16PF	r
1	1	.452	14	.421	14	.383
2	9	-.410	1	.301	1	.374
3	4	.398	10	-.309	9	-.361
4	7	.398	4	.297	4	.334
5	11	-.379	11	-.292	11	-.324
6	10	-.335	12	.281	7	.319
7	14	.275	9	.253	12	-.291
8	5	.269	7	-.234	10	-.280
9	15	-.258	13	.228	15	-.224
10	12	.239	15	-.188	13	.165
11	8	.230	5	.173	3	.155
12	3	.177	3	.152	5	.131
13	13	.122	6	-.152	6	-.130
14	2	.041	8	-.098	2	.114
15	6	-.036	16	-.072	16	-.069
16	16	.019	2	-.006	8	-.067

be an outgoing, trusting and assertive person, while the ones benefitting the most from the course were also forthright, self-sufficient, and practical.

III A Functional and Process-Descriptive Analysis of Communicative Behavior

This last section will be concerned with a functional and process-descriptive analysis of behavior. The analyses differ from the preceding effects of training and correlational approaches in several ways: (1) six of the total twenty-seven teachers were selected as representing examples of poor, good and excellent teaching; (2) a single case study approach will be adopted, although where meaningful, comparisons will be made between averaged performances in the poor, good, and excellent teaching classifications; (3) interaction between the teacher and the group will be considered; (4) contingencies of reinforcement over arbitrarily defined temporal periods will be examined, with special emphasis on the incidence of various operants and their relationship to interaction of the teacher and the group.

Samples of behavior. The twelve micro-lessons (the pre-test and post-test lessons for six student teachers) were chosen as representing samples of poor, good, and excellent teaching. In addition they demonstrate various degrees of change, the poor student-teacher who remains poor, the poor student-teacher who improves to being good, the good student-teacher who improves and enters the excellent

classification, and the excellent teacher who improves within this top category. Table 15 shows the breakdown of these micro-lessons into Poor, Good, and Excellent classifications. Five segments of behavior form the Poor designation, four the Good and three the Excellent. Final designation was based on averages across the three domains of the Teacher-Effectiveness Data.

The Poor, Good, and Excellent Teacher - Preliminary Assessment - Classification Trends

Although our theoretical orientation logically leads to the fact that we are primarily interested in the single-case, an initial search was made for similarities and differences using three teacher categories: poor, good, and excellent. The main usefulness of this approach is that it is helpful in providing an indication of trends or parameters within which an individual piece of behavior can be viewed.

Table 16 provides a summary statement of the McLeish/Martin Operant Analysis of percentages per category as for the teacher and for the group. For example, in the category 'poor' teaching, 75% of the total of 1435 acts by the teacher were in the Intraverbal operant category. Likewise, 86% of the total of 1435 acts by the group were in the Submissive Autoclitic operant category. The teacher talks, the group listens.

In the poor kind of teaching, by far the largest percentage of teacher acts falls in the intraverbal category

TABLE 15

Teacher Effectiveness Ratings
Single Case Studies
Allocation to Poor/Good/Excellent Teachers

(a) Actual Scores

	Pre-Test				Post-Test			
	<u>C</u>	<u>A</u>	<u>O</u>	<u>Avge</u>	<u>C</u>	<u>A</u>	<u>O</u>	<u>Avge</u>
Chris	3.5	3.5	3.57	3.57	3.93	4.0	3.93	3.95
Reg	2.9	2.7	2.78	2.79	3.5	3.43	3.43	3.45
Denis	2.65	2.6	2.57	2.61	3.29	2.36	3.4	3.35
Loretta	3.0	2.7	2.6	2.77	3.64	3.64	3.79	3.69
Max	3.1	2.6	2.79	2.83	2.64	2.21	2.43	2.43
Fred	4.29	4.35	4.35	4.32	4.56	4.7	4.79	4.68

(b) Allocation to Poor/Good/Excellent Teachers (based on Avges)

	Poor	Good	Excellent
Max - Pre	2.83	Loretta- Post	3.69
Max - Post	2.43	Chris- Pre	3.52
Reg - Pre	2.79	Reg- Post	3.45
Loretta - Pre	2.77	Denis- Post	3.35
Denis - Pre	2.61		
Avges	2.69		3.5
			4.32

Differences: (Avges)

Excellent-Good .82
Good-Poor .81

C = Cognitive
A = Affective
O = Overall

TABLE 16

Summary Statement
McLeish/Martin Operant Analysis
Percentages per category for the
Teacher and the Group

<u>Operants</u>	<u>Poor</u>	<u>Teacher</u> <u>Good</u> <u>Excellent</u>	<u>Poor</u>	<u>Group</u> <u>Good</u> <u>Excellent</u>
Mand	1	7 11	2	4 2
Tact	3	3 16	2	5 7
Extended Tact	1	2 8	0	2 1
Echoic	1	2 3	0	1 1
Intraverbal	75	45 31	4	23 20
Positive autoclitic	2	5 3	3	2 3
Informative autoclitic	0	1 1	0	1 0
Negative autoclitic	1	2 1	3	4 1
Submissive autoclitic	7	25 19	86	56 64
Dominant autoclitic	9	8 7	0	2 1
	<u>100</u>	<u>100</u> <u>100</u>	<u>100</u>	<u>100</u> <u>100</u>
Total acts	1435	1223 889	1435	1223 889
# of tchrs	5	4 3		

(75%), with the next highest percentages being recorded in the submissive and dominant autoclitic categories. The largest percentage of group operants occurs in the submissive autoclitic category (86%). This indicates that the poor teacher is functioning as a mere transmitter of information, and that his strategies of presentation (excluding the unbroken stream of discourse) include at best a small proportion of listening behaviors and of dominant control actions. Apart from interspersed questions (mands), intraverbals, and positive and negative autoclitics (contributing in total only 14% to the total group responses), the teacher appears to be lecturing 'at' a captive, unresponsive group.

The good teacher compared to the below average performer, shows a marked difference in this teaching profile. Less than half of his emitted operants are in the intraverbal category (45%). Twenty-five percent are in the submissive autoclitic (listening and under positive control of the group) category. Equal distributions of 8% occur in the mand and dominant autoclitic categories. Both operants exert control over the group, the mand inviting the group to respond in a characteristic way, the dominant autoclitic calling the attention of the group to what the teacher is saying or doing. The group shows evidence of being more involved as compared with the group in the poor teaching classification. Only 56% of the

operants are now submissive. Twenty-three percent of the acts are intraverbal, indicating that the group is contributing to the lesson topic; and a combination of mands, extended tacts, and negative autoclitics account for a further 13% of the group operants. The contingencies between the intraverbal and submissive categories and the teacher and group contributions are indicative of an interactive learning environment. The increase in the variety of operants indicates that a dynamic interaction is also present.

The excellent teacher increases the variety of operants, indicative of a dynamic presentation. Only 31% of his acts fall in the intraverbal category (an operant which serves primarily as the disseminator of information relating to the central theme of the lesson). Making a significant contribution to this teaching profile is the utilization of the tact, extended tact, and the mand. Nineteen percent of the emitted operants fall in the submissive autoclitic (mainly attentive listening) behavior. This is a slight drop from that recorded for the good teacher. Thus the difference in teaching effectiveness is not to be accounted for by an increase in the amount of time the teacher is being controlled by the class. The excellent teacher (in this sample) was able to utilize a varied functional repertoire of operants: given the teaching methodology and subject matter, this resulted in a dynamic, interactive learning environment.

The group operant profile does not differ significantly from the group profile in the 'good' classification. This indicates that group involvement is not the main criterion by which teaching effectiveness can be judged. Indeed, it is plausible to assume that other exemplars of excellent teaching might include a minimum of group operants, provided the teacher possesses a varied repertoire of effective operants.

Table 17 lists the Bales Interaction Process Analysis percentages per category as a function of total acts for the teacher, and total acts for the group. As an example, in the classification designated 'excellent' teaching, 23% of the 1030 acts by the teacher were in category #4 - Gives suggestion. The corresponding group percentage (of 552 acts) was 2%.

The social interaction profile of the poor teacher shows that 72% of the acts were produced by the teacher. These were distributed primarily in Category 6 - Gives Information, Category 5 - Gives Opinion, and Category 11 - Shows tension. Sixty percent of the responses were in the teacher-initiated portion of the task area: that is, no responses were recorded in the 'attempted questions' portion. In the positive affective area, the only contribution was in Category 2 - Dramatizes (13%). In the negative affective area, 21% of the total acts were in the tension release/nervous

TABLE 17

Summary Statement
 Bales Interaction Process Analysis
 Percentages per Category as a function
of Total Acts Teacher, and Total Acts Group

<u>Bales Categories</u>	<u>Poor</u>	<u>Teacher</u>		<u>Poor</u>	<u>Group</u>	
		<u>Good</u>	<u>Excellent</u>		<u>Good</u>	<u>Excellent</u>
1	3	3	7	9	4	3
2	13	20	17	11	11	24
3	1	5	3	6	3	4
4	9	12	23	3	13	2
5	23	11	8	17	19	13
6	28	19	23	13	5	5
7	0	3	4	7	2	5
8	0	2	0	4	3	0
9	0	1	0	1	0	1
10	0	1	1	3	6	0
11	21	21	13	13	22	39
12	1	2	1	13	12	4
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total %	100	100	100	100	100	100
Total Acts	1289	1119	1030	191	651	552
# of Tchrs	5	4	3			

category. The group percentage distribution was more evenly distributed, with half of the responses in the task area (45%), and half of the responses in the social-emotional area (55%). In the negative area the responses were evenly divided between Category 11 - Shows tension, and Category 12 - Seems Unfriendly.

The social interaction profile for the good teacher shows an increase of acts in the positive social-emotional area, with the preponderance of these in Category 2 - Dramatization. In the negative social-emotional area, 21% of the acts were in the tension release category. Again, the task related responses were unevenly distributed in the dissemination categories 4, 5, and 6. The group profile was unevenly distributed, with most of the social-emotional responses occurring in the negative Category 11 - Shows tension; and most of the task-related responses falling in Category 4 - Gives Suggestion, and Category 5 - Gives opinion. The major difference between the teacher profiles for the poor and good teacher is in the more even distribution between the social-emotional and task areas as teaching improves.

The social interaction profile for the excellent teacher in the social-emotional area shows the balance in favour of the positive affective responses, with significant contributing categories being Category 2 - Dramatizes, and Category 11 - Shows tension. Most of the responses were

recorded in Category 4 - Gives suggestion, and Category 6 - Gives Information (46%). The group interaction profile again showed an increase in responses in Category 2 - Dramatizes (24%) and Category 11 - Shows tension (39%). Only 26% of the acts were recorded in the task area, and half of these were in Category 5 - Gives Opinion.

In summary, as the quality of the teaching improves, there is a general increase for the teacher in the proportion of acts falling in the positive-affective area and a decrease in the proportion of acts falling in the negative-affective area. In the task related area, the responses remain concentrated in categories concerned with 'giving' suggestions, opinions and information. In the group interaction profile, increases occur in the social-emotional area, concentrated in categories 2 - Dramatizes, and 11 - Shows tension. As with the teacher profile, very few responses were recorded in categories 7, 8, and 9.

In comparing information obtained from the Bales and the McLeish/Martin systems, the predominantly descriptive basis of the social interaction profile and the functional basis of the operant profile becomes manifest. In general, one becomes aware that the occurrence of various social interaction behaviors does not represent the salience of those acts in respect to the total environment. While the social-interaction system yields data based on relationships

between an immediately preceding response and the response in the here-and-now, it does not take into account the far-reaching effect of these variables on ongoing, new or changing behaviors in the group. Nevertheless, it is of some interest to be provided with social-interaction data as it allows the research worker to determine the relevance of such acts to the total ongoing learning process as represented by the functional analysis. That is, the operant analysis alone does not allow us to state the single response occurrences considered as non-salient operant contributors. The two observation systems are therefore complementary, and will continue to provide dual explanatory functions in the single case studies which follow.

Single Case Study #1

Chris was a member of the Experimental Participant Group. His pre-test micro-lesson indicated that he was one of the better student-teachers in this group. Chris improved approximately .50, from an average of 3.52 in the pre-test to an average of 3.95 in the post-test.

Teacher-Effectiveness

	<u>Cognitive</u>	<u>Affective</u>	<u>Overall</u>	<u>Average</u>
Pre-Test	3.5	3.5	3.57	3.52
Post-Test	3.93	4.0.	3.93	3.95

In terms of classifications, his pre-test performance is considered good, and his post-test performance excellent.

Table 18 shows Chris' pre-test and post-test performances as coded by the McLeish/Martin system. Each analysis is divided into ten operant categories, into teacher or group contributions, and into time sequences of 80-3" blocks (4 mins). The first time block may be less than 80-3" acts or units. The raters began coding as soon as the time signals were heard on the video-tape, and in some cases there was a lag of approximately 4 frames before the video became operational. The last block of time also varies as to length of time or number of acts recorded. In some single case studies, the blocks of time were extended to a fifth block. In each case the number of acts is listed on the last line of the test data, underneath the total line for each teacher and group column. To the far right, you will find the totals of each operant across blocks of time, and grand totals for the teacher and group. In each case, the totals for the teacher and group will be the same.

The purpose of examining each student-teacher's performance by blocks of time is to investigate any change in operant patterning as the lesson proceeds.

It is hypothesized that in keeping with the structure of a lesson plan, the first block of 4 minutes in the micro-lesson should be concerned with an introduction to the class of the topic. There should therefore be some interaction with the class as the teacher attempts to set the

TABLE 18

McLeish/Martin Operant Analysis - Frequencies
Case #1 - Chris - Experimental Participant

Operant	Time Block								Totals	
	1		2		3		4			
	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp
(a) Pre-Test										
M	10	1	2	1	21	4	2	2	35	8
T	10	0	2	0	3	1	1	6	16	7
E	3	0	4	0	4	3	5	9	16	12
C	0	2	0	0	3	3	0	0	3	5
I	29	17	47	15	11	18	31	17	118	67
P	7	1	8	0	3	0	3	1	21	2
F	0	0	0	0	0	0	0	0	0	0
N	0	1	1	0	1	1	4	1	6	3
S	14	58	7	64	24	50	24	40	69	212
D	7	0	9	0	10	0	7	1	33	1
Totals	80	80	80	80	80	80	77	77	317	317
(b) Post-Test										
M	7	0	8	5	13	3	8	0	36	8
T	5	0	5	2	2	3	0	3	12	8
E	2	0	13	4	5	4	8	0	28	8
C	4	1	0	0	5	0	3	0	12	1
I	39	13	17	23	17	45	9	17	82	98
P	2	0	5	3	2	0	2	1	11	4
F	0	0	0	0	0	0	0	0	0	0
N	5	2	3	1	0	0	0	0	8	3
S	6	64	24	41	34	24	15	26	79	155
D	10	0	5	1	2	1	2	0	19	2
Totals	80	80	80	80	80	80	47	47	287	287

Operant Key:

M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Intraverbal;
P - Positive Autoclitic; F - Informative Autoclitic; N - Negative Auto-
clitic; S - Submissive Autoclitic; D - Dominant Autoclitic

pattern for the body of the lesson. Initially, there should also be a high percentage or frequency of operants in the vocal domain by the teacher, and a high percentage of operants by the group in the submissive autoclitic area (listening). The pattern in the second and third blocks of time should tend to be task-oriented; and the last block of time would constitute a time of summarizing, perhaps joking, etc., as the lesson draws to a close. In analyzing the single cases, no hypotheses can be made as to specific changes over time, inasmuch as teaching methodology varies for each lesson. A description of the time sequences will be given, and then a summary, and possible interpretative comments, where meaningful.

Figure 1 shows Chris' pre-test and post-test performances as a function of the operant categories, and blocks of time. Length of time for the pre-test lesson was 15.8 mins. Length of time for the post-test lessons was 14.4 mins. Figure #1 is taken from data contained in Table 18.

Appendix VI, Figures A and B shows the pre-test and post-test breakdowns for each operant over the four blocks of time by percentages. To avoid confusion the actual figures and tables will not be referred to in this analysis, but the descriptive statements are based on these data and the information contained in Table 18.

Pre-Test

In Time Block #1, Chris utilizes a variety of operants

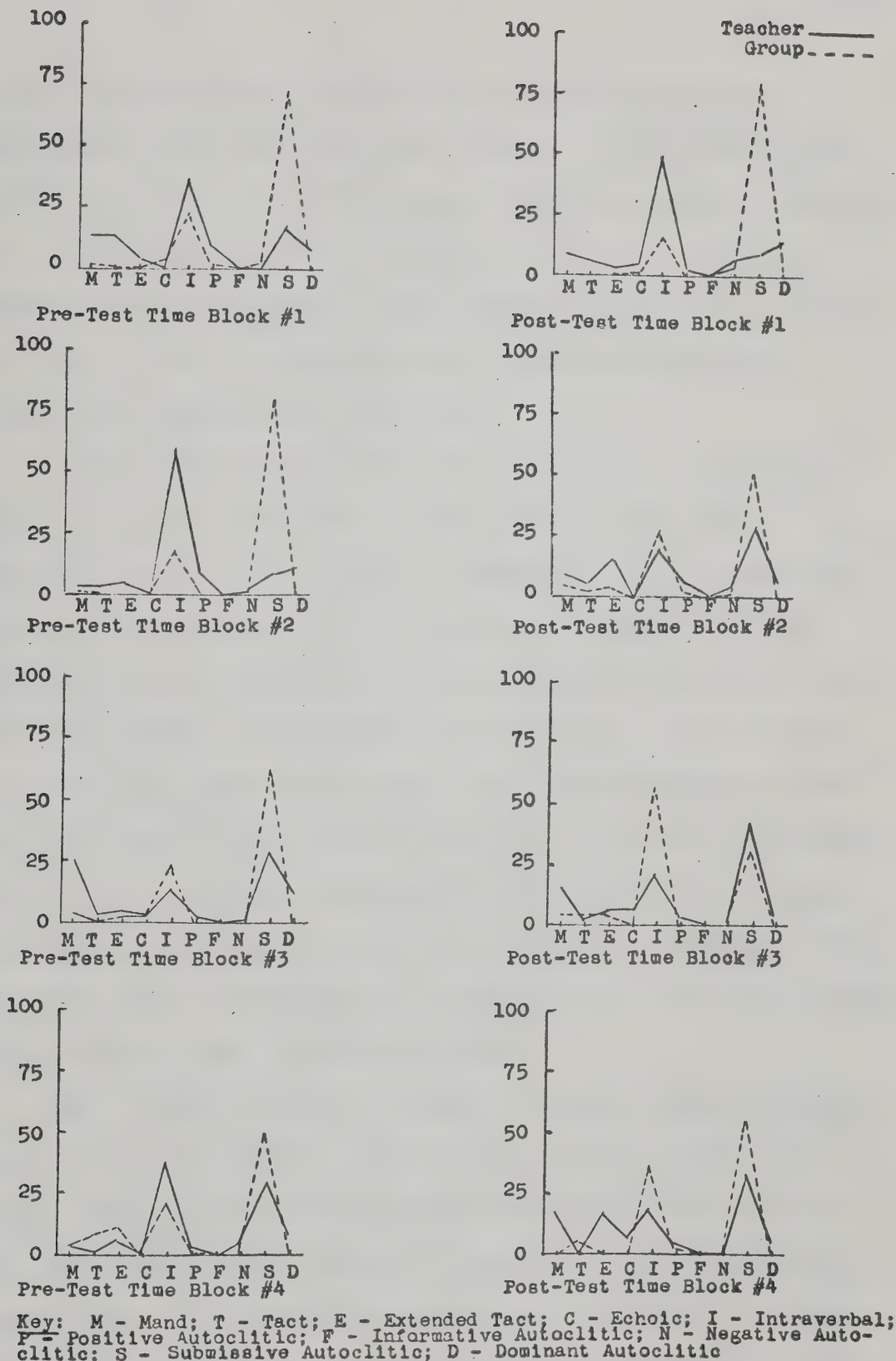


Figure 1 McLeish/Martin Operant Profile Percentage Breakdown
Case #1, Chris - Experimental Participant

to gain the attention of the group, facilitate their involvement, and introduce the lesson. While 36% of the operants fall in the intraverbal operant category, 18% also fall in the submissive (listening) category. The group shows active involvement in the learning activities 27% of the time. This is indicative of positive interaction between the teacher and the group.

In Time Block #2, there is a decrease in the operants used to attract the initial attention of the group: i.e. the mand, and the tact, and an increase in the intraverbal operants indicating that the teacher is engaged in the dissemination of basic information necessary as the framework for possible involvement by the group. The teacher is silent only 9% of the time, but this combined with the positive autoclitics, and the dominant autoclitic indicates that he still manages to keep the attention of the class. The group is submissive for most of the time segment. However the operants emitted are indicative of task involvement (intraverbals 19%, and one question).

Time Block #3 shows a return to a more varied operant profile for the teacher, and a more active role for the group. Having given the class the baseline from which to work, the teacher now reduces drastically his intraverbal input (14%). He concentrates on using the mand to direct and involve the class in the discussion, and uses the dom-

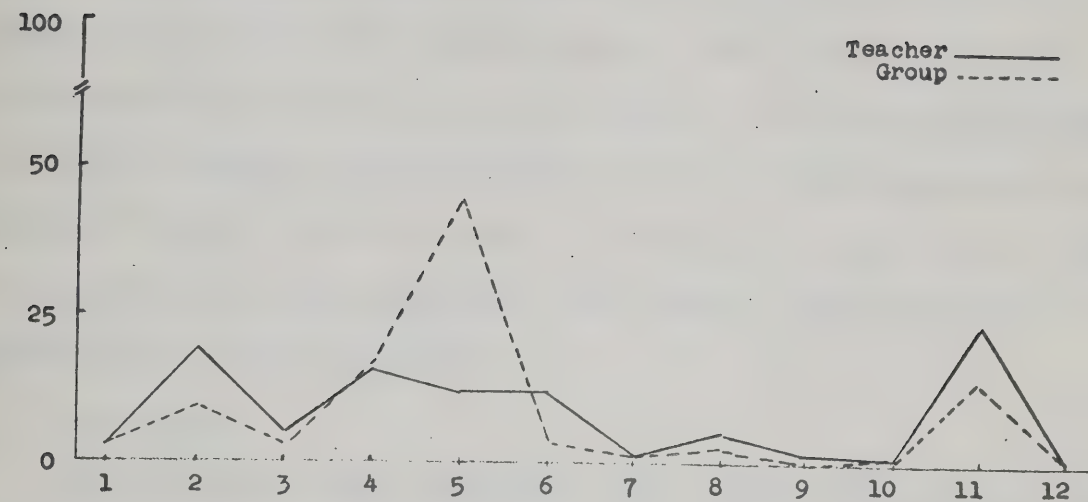
inant autoclitic to control and integrate the interaction. There is a decrease in use of the positive autoclitic as the involvement of the class increases. This teacher does not use negative acts to initiate or maintain the facilitative learning environment. The group is now increasing its involvement, and is submissive 63% of the time. Again, most of the operants are in the task area, with 23% falling in the intraverbal category, and a further 14% distributed among the mand, tact, extended tact and echoic. No positive autoclitics are generated by the group, although the echoic responses indicate a positive reaction to operants initiated by the teacher or members of the group.

Time Block #4, if a lesson plan is followed, would be the time for resolving ongoing discussion, attempting to summarize the main points, and possibly ending the discussion on a personal note. Chris shows an increase in intraverbals, and a decrease in mands indicating that he is stressing the dissemination of information relating to the lesson topic. He still maintains a good ratio of submissive autoclitics (30%), and uses the dominant autoclitic and negative autoclitic as controlling and integrating mechanisms. The group continues to show a strong input, and is submissive only 50% of the time. Again, most of the operants are in the task area.

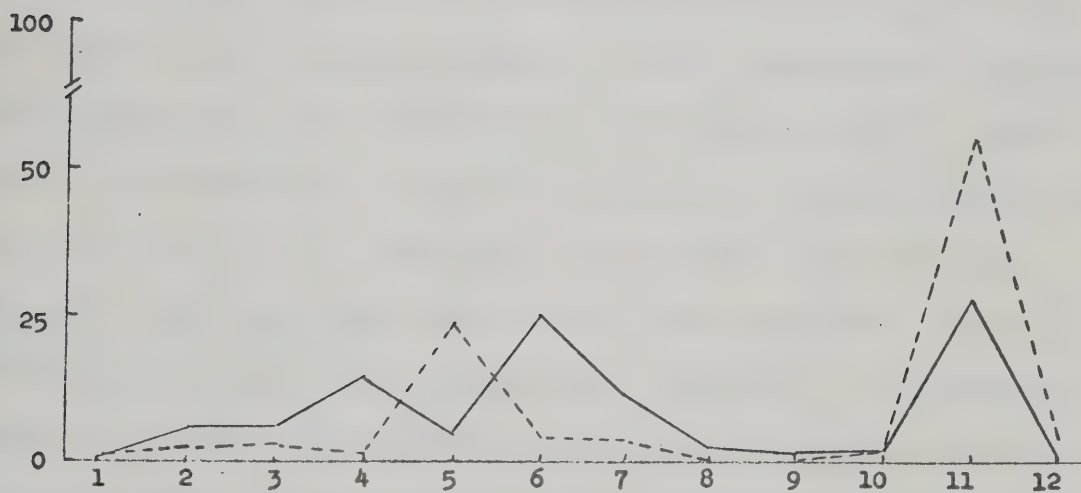
In summary, Chris' strategy over the four time blocks

becomes obvious from a functional analysis. His operant profile reflects flexibility and the ability to utilize the involvement of the class in the task area. The high incidence of submissive operants and the varied use of the task-related operants is reinforced by increasing involvement by the class, and a lack of negative acts.

Figure 2 shows the percentage teacher acts in each Bales' category as a function of total acts per teacher, and percentage group acts as a function of total acts for the group. Figure 2(a) represents the pre-test results. This analysis supports the McLeish/Martin findings inasmuch as a small percentage of acts were recorded in Category 1 - Seems Friendly, and Category 3 - Agrees. A non-significant number of acts were recorded in Category 10 - Disagrees and Category 12 - Seems unfriendly. Although a significant proportion of acts were recorded in the dissemination categories 4, 5, and 6, there is some evidence of use of the question categories 7, 8, and 9. A sizeable percentage of acts were recorded in Category 2, Dramatizes. This would be reflected in the operants designated tact and extended tact. The Bales' analysis has picked up a large percentage of acts in the tension release category #11. This is an interesting finding when one looks at the functional qualities of this category of behavior: that is, does it operate on the environment in a predictable manner? In terms of the McLeish/Martin coding



(a) Pre-Test



(b) Post-Test

Key:

- | | |
|-----------------------|-----------------------|
| 1 - Seems friendly | 7 - Asks information |
| 2 - Dramatizes | 8 - Asks suggestion |
| 3 - Agrees | 9 - Asks opinion |
| 4 - Gives opinion | 10 - Disagrees |
| 5 - Gives suggestion | 11 - Shows tension |
| 6 - Gives information | 12 - Seems unfriendly |

Figure 2 - Bales Social Interaction Profile: Percentage Breakdown
Case #1, Chris - Experimental Participant

rules, how salient is the occurrence of these behaviors in terms of the tri-member contingency? The operant analysis shows that these behaviors do not exert a controlling function in Chris' teaching effectiveness: that is, by themselves they neither inhibit nor facilitate interaction in the class. The combination of these behaviors with other responses would constitute operant behavior.

Post-Test

Time block #1 again reflects the variety of operants used by Chris to gain the attention of the group and to introduce the lesson. As the time blocks continue, we see an increased use of the mand, and a decrease in the intraverbal. Chris' use of the submissive autoclitic increases substantially from time block #1 to #2, continues its increase into time segment #3, and falls back down to the level achieved in time segment #2 during the last period. There is a decrease in emission of negative operants as well as dominant operants as time progresses, suggesting maximum efficacy of these autoclitics in the opening portion of the lesson.

The group profile indicates involvement throughout the entire teaching sequence. However, the operant profile achieves maximal variation in the middle segments of the lesson. Incidence of intraverbals increased substantially from time segment 1 to 3, reducing somewhat in the last time segment. As the intraverbals increased or decreased, the submissives followed a reverse pattern.

The main difference between the pre-test and post-test lessons lies in the decrease in intraverbals by Chris and the increase in submissive autoclitics. The group profile shows an increase in intraverbals and a decrease in submissive autoclitics.

The Bales' post-test analysis shows an increase in the incidence of giving information, and a decrease in the dramatization category. This decrease in the latter cannot be explained by a concomitant change in the tact and extended tact operants as it was in the pre-test analysis inasmuch as the incidence of tact occurrence increased rather than decreased. The excessive tension recorded in the group was not considered salient in the McLeish/Martin functional analysis.

Single Case Study #2

Max was a member of Control Group #1. In terms of classifications, his pre-test performance and post-test performances are considered examples of poor teaching. His ratings on the Teacher Effectiveness scales were as follows:

	<u>Cognitive</u>	<u>Affective</u>	<u>Overall</u>
Pre-test	3.1	2.6	2.79
Post-test	2.64	2.21	2.43

Table 19 shows Max's pre-test and post-test performance as coded by the McLeish/Martin system. Figure 3 shows Max's

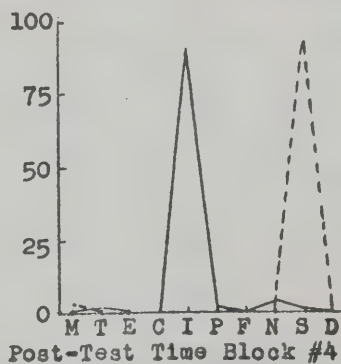
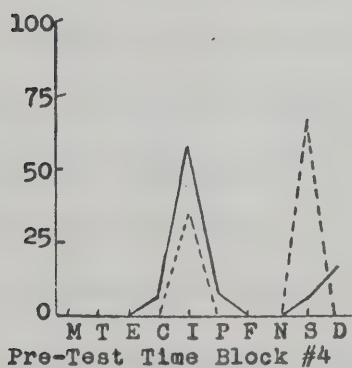
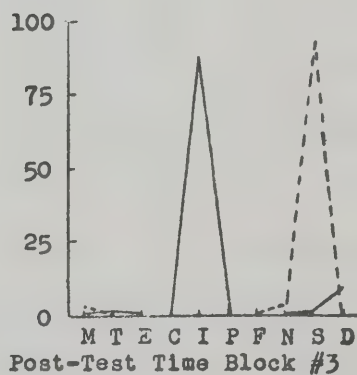
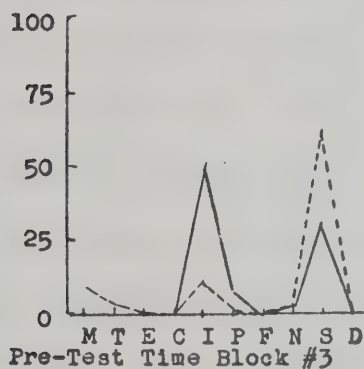
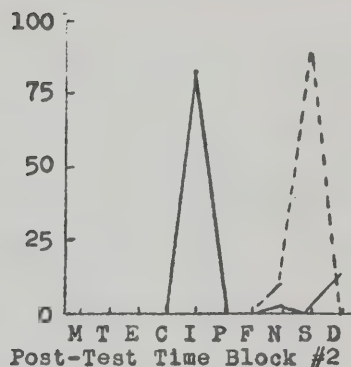
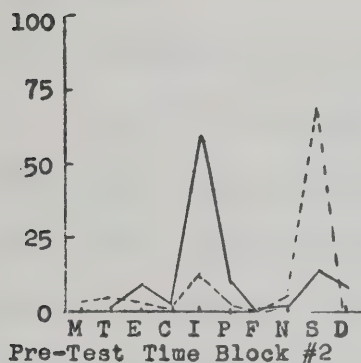
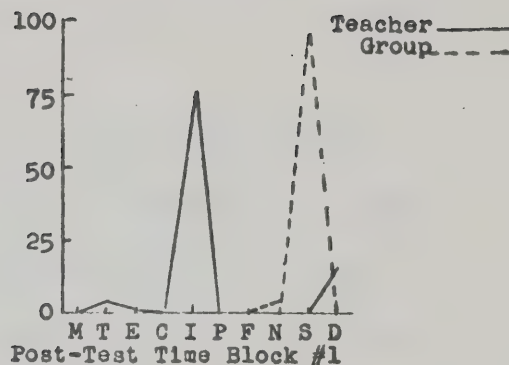
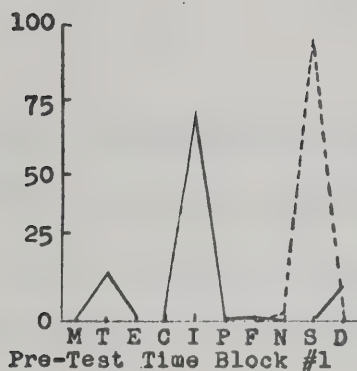
TABLE 19

McLeish/Martin Operant Analysis - Frequencies
Case #2 - Max - Control Group #1

Operant	Time Block								Totals	
	1		2		3		4			
	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp
(a) Pre-Test										
M	0	0	0	1	0	8	0	0	0	9
T	12	0	0	3	1	3	0	0	13	6
E	0	0	7	2	1	1	0	0	8	3
C	0	0	1	0	0	0	1	0	2	0
I	54	0	47	11	41	11	7	4	149	26
P	0	0	8	3	6	3	1	0	15	6
F	1	0	0	0	1	0	0	0	2	0
N	0	3	1	4	2	3	0	0	3	10
S	0	73	10	56	26	50	1	8	47	187
D	9	0	6	0	2	1	2	0	19	1
Totals	76	76	80	80	80	80	12	12	248	248
(b) Post-Test										
M	0	0	0	0	0	2	0	2	0	4
T	4	0	0	0	1	0	1	0	6	0
E	1	0	1	0	0	0	0	0	2	0
C	1	0	0	0	0	0	0	0	1	0
I	60	0	66	0	70	0	47	0	253	0
P	0	0	0	0	0	0	1	0	1	0
F	0	0	0	0	0	0	0	0	0	0
N	0	3	2	8	0	3	2	1	4	15
S	0	75	0	72	1	75	1	49	2	281
D	12	0	11	0	8	0	0	0	31	0
Totals	78	78	80	80	80	80	52	52	300	300

Operant Key:

M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Intraverbal;
P - Positive Autoclitic; F - Informative Autoclitic; N - Negative Auto-
clitic; S - Submissive Autoclitic; D - Dominant Autoclitic



Key: M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Intraverbal; P - Positive Autoclitic; F - Informative Autoclitic; N - Negative Autoclitic; S - Submissive Autoclitic; D - Dominant Autoclitic

Figure 3 McLeish/Martin Operant Profile Percentage Breakdown
Case #2, Max - Control Group #1

pre-test and post-test performance as a function of the operant categories and blocks of time. Appendix VI, Figures C and D show the pre-test and post-test percentage breakdowns for each operant over the four blocks of time.

Pre-Test

Max utilizes a narrow range of operants throughout the lesson. In the first time segment, his responses are predominantly in the intraverbals category (71%), followed by the tact (16%) and the dominant autoclitic (12%). During the first four minutes of his presentation, Max gave no opportunity for group input. Consequently the group operant profile is predominantly made up of submissive autoclitics, with some negative autoclitics being recorded nonverbally.

Time Block #2 shows him continuing to dominate the class through an excessive occurrence of acts in the intraverbal category (59%), and only 13% in the submissive autoclitic area. As in time block #1, he continues to control through use of the dominant autoclitic; and now shows positive autoclitic operants as part of his profile. The group operant profile improves from the first time block, although 70% of the operants still fall within the submissive category. Fourteen percent of the operants are intraverbals.

In Time Block #3, Max's operant profile becomes restricted to the intraverbals plus various autoclitics, notably the submissive autoclitic (33%). The group has reduced the

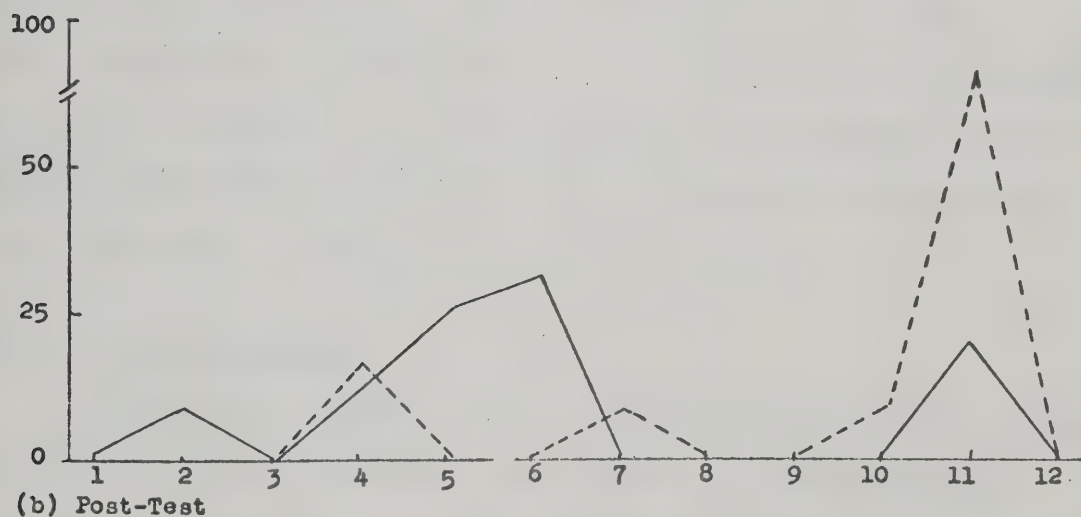
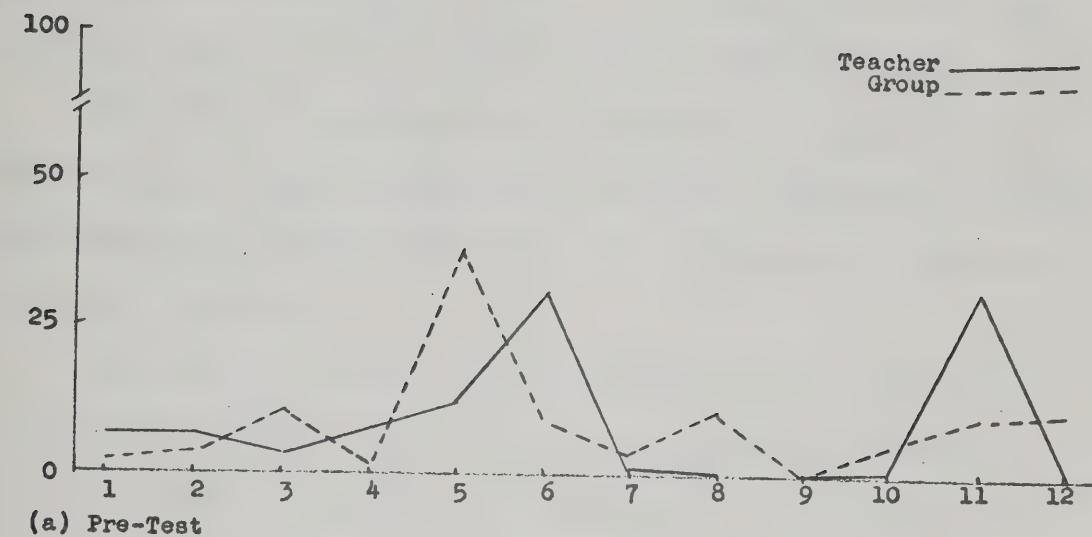
amount of time spent in listening or other submissive acts, and is now emitting infrequent intraverbals and mands. In the last time block which is very short, Max emits less submissive operants but increases his dominant autoclitics and echoics. The group profile consists of intraverbals and submissive autoclitics.

In summary, it appears that Max does not possess the basic communication skills. In the first four minutes of his lesson he controlled the presentation through a constant barrage of intraverbals. In the second and third time blocks he fails to take advantage of the various operants being emitted by the group, and it appears that they interacted in spite of his efforts! Not once during the entire lesson did he use questioning techniques.

The Bales Analysis (Figure 4) shows that his social interaction consisted mainly of giving opinion and information, and showing tension and nervousness. The Bales interaction profile for the group shows that most of their acts were recorded in the 'gives information' category. The profile also indicates that more acts occurred in the negative social-emotional area than the positive.

Post-Test

Max's post-test performance shows a deterioration from his pre-test. During the entire fifteen minutes, his operant profile was confined to intraverbals, (range = 77% to 90%),



Key:

- | | |
|-----------------------|-----------------------|
| 1 - Seems friendly | 7 - Asks information |
| 2 - Dramatizes | 8 - Asks suggestion |
| 3 - Agrees | 9 - Asks opinion |
| 4 - Gives opinion | 10 - Disagrees |
| 5 - Gives suggestion | 11 - Shows tension |
| 6 - Gives information | 12 - Seems unfriendly |

Figure 4 - Bales Social Interaction Profile: Percentage Breakdown
Case #2, Max - Control Group #1

and dominant autoclitics (10%). He emitted only two submissive autoclitics, and gave positive operants only once.

The group contribution to interaction consisted of a spattering of negative operants and four instances of mands. Approximately 95% of their time was recorded as submissive autoclitic operants!

The Bales' data for this post-test shows that most of the teacher's social interaction acts were in categories 4, 5, and 6, with no acts at all recorded in the task area dealing with questions. In the social-emotional area, approximately 8% of the acts were in Category 2 - Dramatizes, and 20% in Category 11 - Shows tension, nervousness. The social interaction profile for the group shows most of the acts recorded in Category 11 - Shows tension.

Single Case Study #3

Loretta was a member of the Experimental Observer Group. In terms of classifications, her pre-test performance is considered an example of poor teaching, while her post-test performance is an example of good teaching. Her ratings on the Teacher Effectiveness scales were as follows:

	<u>Cognitive</u>	<u>Affective</u>	<u>Overall</u>
Pre-test	3.0	2.7	2.6
Post-test	3.64	3.64	3.79

Table 20 shows Loretta's pre-test and post-test performance as coded by the McLeish/Martin system. Figure 5 shows

TABLE 20

McLeish/Martin Operant Analysis - Frequencies
Case #3 - Loretta - Experimental Observer

Operant	Time Block								Totals	
	1		2		3		4			
	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp
(a) Pre-Test										
M	0	1	0	0	0	0	3	2	3	3
T	4	0	0	0	2	1	1	5	7	6
E	0	0	0	0	0	0	0	1	0	1
C	0	0	0	0	1	0	0	1	1	1
I	64	1	70	0	63	0	9	24	206	25
P	1	0	0	0	1	1	8	4	10	5
F	0	0	0	0	0	0	0	0	0	0
N	0	0	1	2	1	2	2	0	3	3
S	1	77	0	78	1	77	26	11	28	243
D	9	0	9	0	11	0	0	0	29	0
Totals	79	79	80	80	80	80	48	48	287	287
(b) Post-Test										
M	14	2	13	1	1	4	5	1	33	8
T	4	1	0	8	0	18	0	15	4	42
E	9	0	0	7	0	2	0	1	9	10
C	0	0	0	0	0	0	0	1	0	1
I	37	14	5	36	6	29	1	15	49	94
P	1	1	3	1	2	1	10	0	16	3
F	1	0	0	0	0	0	0	1	1	1
N	1	2	3	11	2	13	0	6	6	32
S	4	58	52	14	69	10	33	6	158	88
D	7	0	4	2	0	3	0	3	11	8
Totals	78	78	80	80	80	80	49	49	287	287

Operant Key:

M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Intraverbal;
P - Positive Autoclitic; F - Informative Autoclitic; N - Negative Auto-
clitic; S - Submissive Autoclitic; D - Dominant Autoclitic

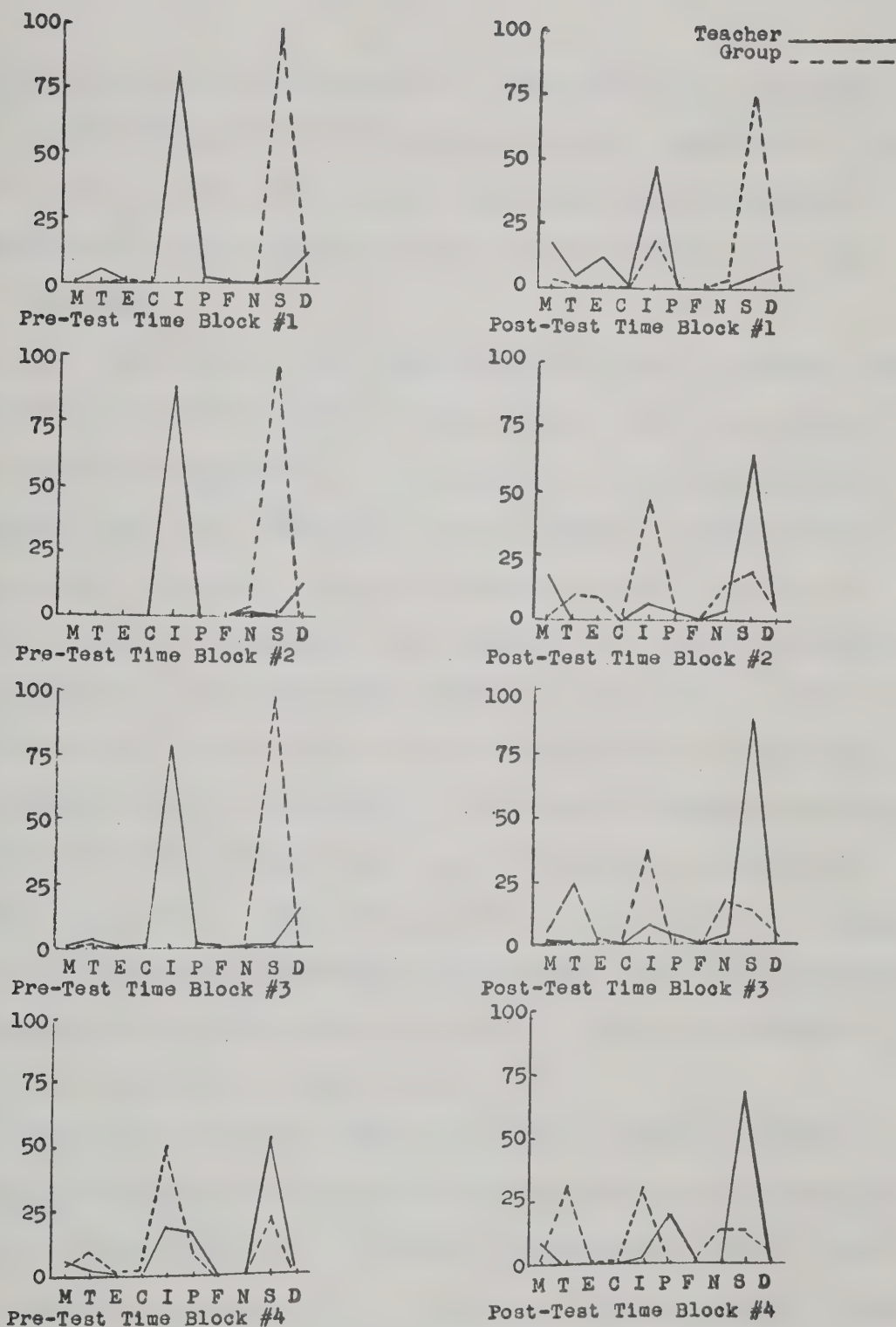


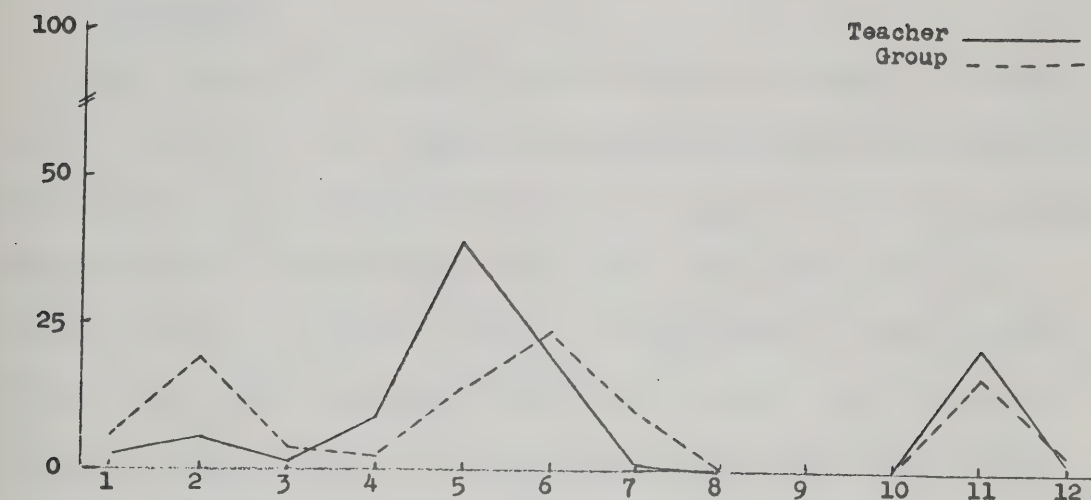
Figure 5 McLeish/Martin Operant Profile Percentage Breakdown
Case #3, Loretta - Experimental Observer

Loretta's pre-test and post-test performance as a function of the operant categories and blocks of time. Appendix VI, Figures E and F, show the pre-test and post-test percentage breakdowns for each operant over the four blocks of time.

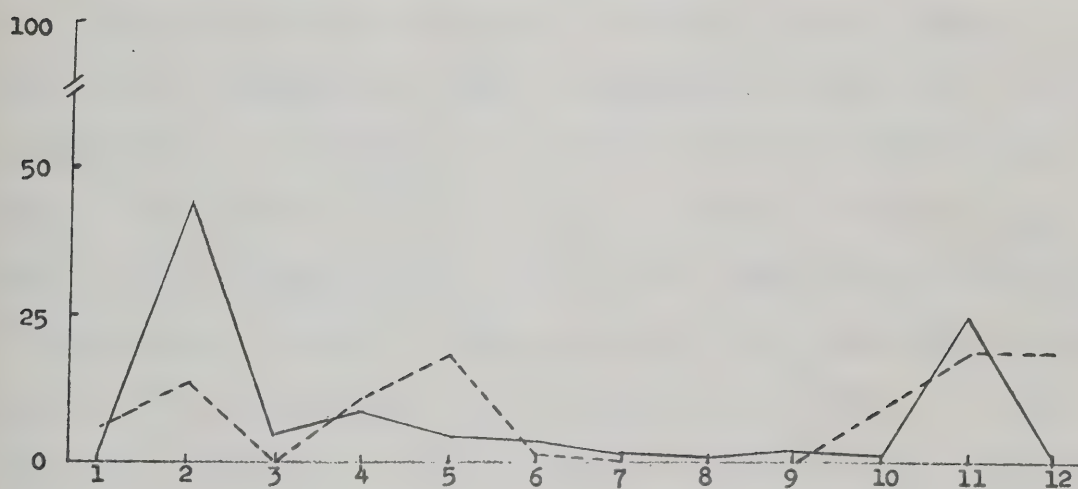
Pre-Test

The first three time blocks show Loretta's operant profile restricted to intraverbals (approximately 83%), and use of the dominant autoclitic. Consequently, the group profile consists mainly of submissive autoclitics. In the fourth time block, Loretta's profile becomes varied. In this 2½ minute segment of behavior, she emits only 19% intraverbals, and increases her submissive (listening) operant to 54%. In addition she incorporates the mand and positive affective autoclitic into her repertoire. The group responds with an increase of 50% intraverbals and a decrease in submissive autoclitics (23%). The group profile also expands to include tacts and positive affective autoclitics. This last segment of behavior was predicated by Loretta's use of a series of questions directed to the group.

The Bales Analysis (Figure 6) shows most of Loretta's social interaction occupying the three categories gives suggestion, gives opinion, and gives information; and in the tension release category, #11. The group social interaction profile shows that the main categories were: dramatizes, gives opinion, gives information, and shows tension.



(a) Pre-Test



(b) Post-Test

Key:

- | | |
|-----------------------|-----------------------|
| 1 - Seems friendly | 7 - Asks information |
| 2 - Dramatizes | 8 - Asks suggestion |
| 3 - Agrees | 9 - Asks opinion |
| 4 - Gives opinion | 10 - Disagrees |
| 5 - Gives suggestion | 11 - Shows tension |
| 6 - Gives information | 12 - Seems unfriendly |

Figure 6 - Bales Social Interaction Profile: Percentage Breakdown
Case #3, Loretta - Experimental Observer

Post-Test

Time Block #1 reveals that Loretta is using a varied set of operants, all indicating maximum control and one-way interaction. In the intraverbal category, 47% of the acts were recorded, while the mand, tact, and extended tact accounted for a further 35% of the operants. Five percent of the operants were submissive autoclitics, and 9% were dominant autoclitics. The group profile was largely submissive autoclitics (74%), plus 18% intraverbals.

In Time Block #2, Loretta's operant profile shows a significant decrease in the intraverbal category (6%), and a significant increase in the submissive autoclitic (65%). Again, the effective use of mands initiated the group reaction of 45% intraverbals, and only 18% submissive autoclitics. A substantial amount of negativism was also generated in the group (14%), plus tacts and extended tacts (19%). In Time Block #3, Loretta's profile remains the same as in the previous time segment with the exception that she now has faded out the use of mands. As a result submissive autoclitics increases. From her small amount of vocal operants, it is concluded that the interaction is largely within the group. The group profile in this third segment is mainly to be accounted for by intraverbals and tacts. There is an increase in negative autoclitics (16%), and mands (5%).

In Time Block #4 (approximately 2 minutes), Loretta

increases her mands and positive autoclitics. However, her submissive autoclitics remain high at 67%. The group increases its mands, but otherwise the profile is remarkably like the previous segment.

The Bales Interaction Analysis (Figure 6) indicates that Loretta's social interaction profile is predominantly composed of Category 2 - Dramatization, and Category 11 - Shows tension. The group profile shows contributing factors of Category 2 - Dramatizes, Category 4 - Gives Suggestion, and Category 11 - Shows tension.

A few explanatory comments regarding the content of the lesson are of interest at this point. Loretta engaged in role play of a controversial kind during the first time block. This had the effect of leading to a group discussion which largely excluded Loretta. One had the impression in viewing the tapes that she didn't quite know how to handle her success, especially when the discussion took on negative overtones. Nonetheless, she did manage to resolve and conclude the lesson in the last segment, mainly through her increasing use of the positive autoclitic operant and by introducing alternative points of view through questioning techniques (mands).

Single Case Study #4

Fred was a member of the Control Group #2. In terms of the effectiveness classification, his pre-test and post-test

performances are to be considered examples of excellent teaching. His ratings on the Teacher Effectiveness scales were as follows:

	<u>Cognitive</u>	<u>Affective</u>	<u>Overall</u>
Pre-test	4.29	4.35	4.35
Post-test	4.56	4.7	4.79

Table 21 shows Fred's pre-test and post-test performances as coded by the McLeish/Martin system. Figure 7 shows Fred's pre-test and post-test performances as a function of the operant categories and blocks of time. Appendix VI, Figures G and H, shows the pre-test and post-test percentage breakdowns for each operant over the four blocks of time.

Pre-Test

Block #1 of Fred's lesson consisted of 49% intraverbals. Tacts and extended tacts contributed significantly (31%), as did the dominant autoclitic (11%). The mand accounted for 5% of the operants. The group profile consisted almost entirely of submissive autoclitics. Time Block #2 of the lesson shows the same varied operant profile. He has increased the use of the mand, and decreased his intraverbals. Submissive autoclitics contribute 8% to the total profile. The group profile shows 14% of their acts in the intraverbal category, and 3% in the positive affective autoclitic area. Block #3, the final segment of the lesson shows an increase in submissive autoclitics for the teacher, and an increase in intraverbals and decrease in submissive autoclitics for

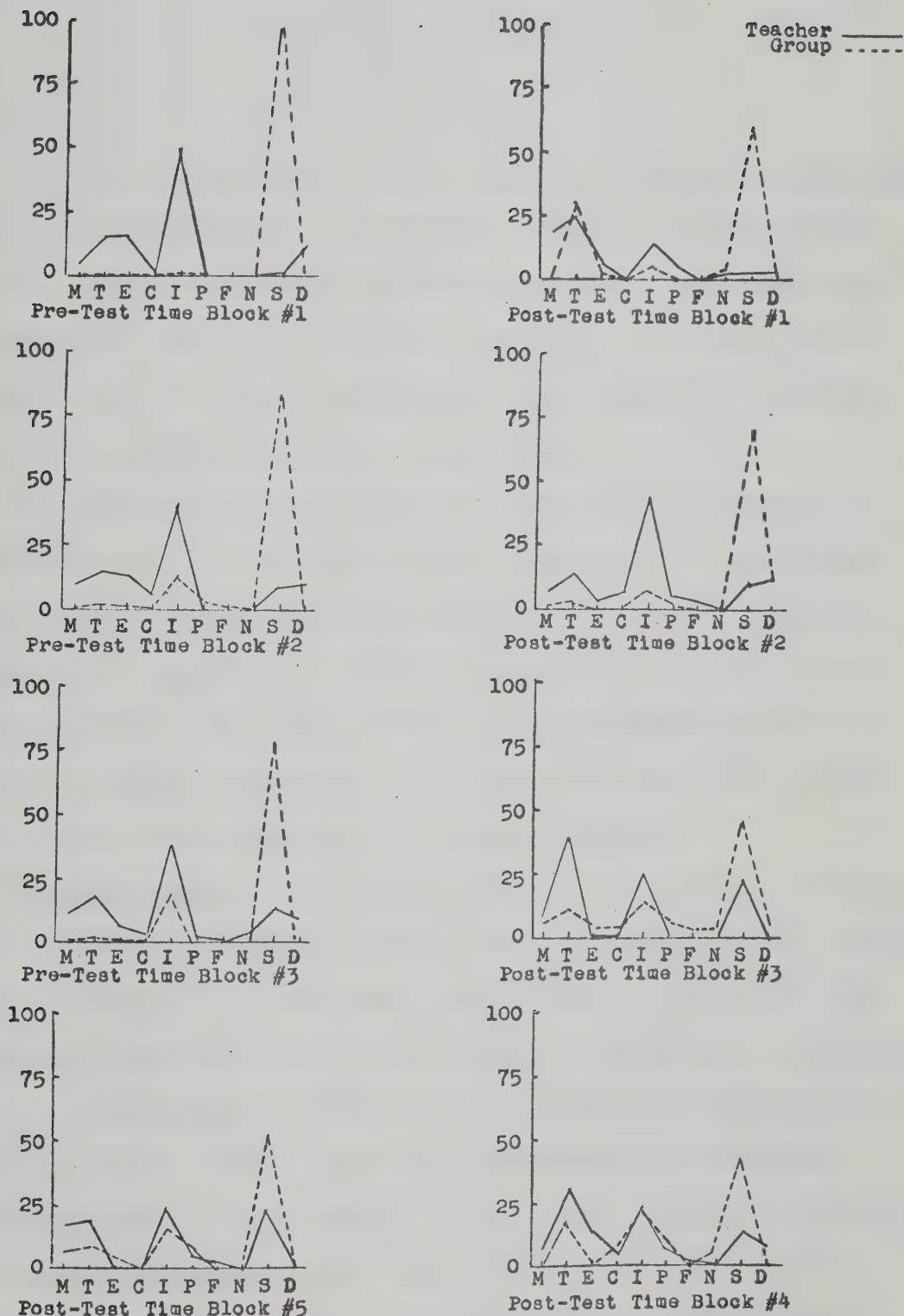
TABLE 21

McLeish/Martin Operant Analysis - Frequencies
Case #4 - Fred - Control Group #2

Oper- ant	Time Block										Totals	
	1		2		3		4		5			
	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp
(a) Pre-Test												
M	4	0	8	0	9	0					21	0
T	12	0	12	1	14	1					38	2
E	13	0	10	0	5	0					28	0
C	1	0	5	0	3	1					9	1
I	39	1	32	10	30	15					101	26
P	1	1	0	2	0	1					1	4
F	0	0	0	0	0	0					0	0
N	0	1	0	0	2	0					2	1
S	1	77	6	67	10	62					17	206
D	9	0	7	0	7	0					23	0
Totals	80	80	80	80	80	80					240	240
(b) Post-Test												
M	12	1	5	1	6	5	5	0	10	4	38	11
T	15	19	11	3	31	9	24	13	11	5	92	49
E	4	1	2	0	1	2	10	0	0	2	17	5
C	0	0	5	0	1	2	2	5	0	0	8	7
I	8	4	35	6	20	12	18	18	14	11	95	51
P	4	0	3	2	1	5	5	8	3	4	16	19
F	0	0	2	0	1	3	1	0	1	0	5	3
N	1	2	0	0	0	3	0	3	0	0	1	8
S	19	37	8	66	18	37	10	33	17	31	72	204
D	1	0	9	2	1	2	5	0	2	1	18	5
Totals	64	64	80	80	80	80	80	80	58	58	362	362

Operant Key:

M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Inraverbal;
P - Positive Autoclitic; F - Informative Autoclitic; N - Negative
Autoclitic; S - Submissive Autoclitic; D - Dominant Autoclitic



Key: M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Intraverbal;
P - Positive Autoclitic; F - Informative Autoclitic; N - Negative Auto-
clitic; S - Submissive Autoclitic; D - Dominant Autoclitic

Figure 7 McLeish/Martin Operant Profile Percentage Breakdown
Case #4, Fred - Control Group #2

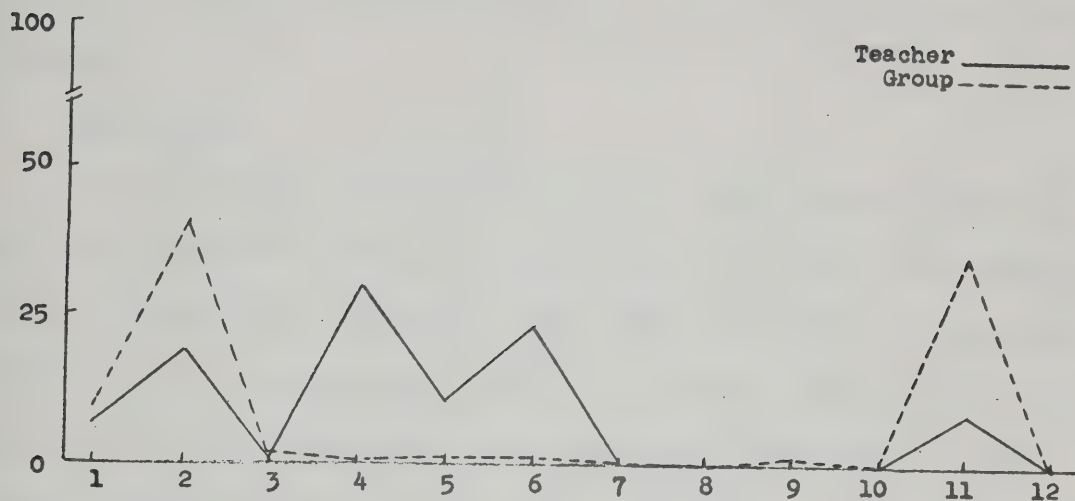
the group.

Here we see evidence of an excellent lesson without the excessive involvement of the group. This was accomplished with an operant repertoire consisting of the mand, the tact and extended tact, the dominant autoclitic, and the intra-verbal. As the lesson progressed, the submissive autoclitic was added to this functional repertoire.

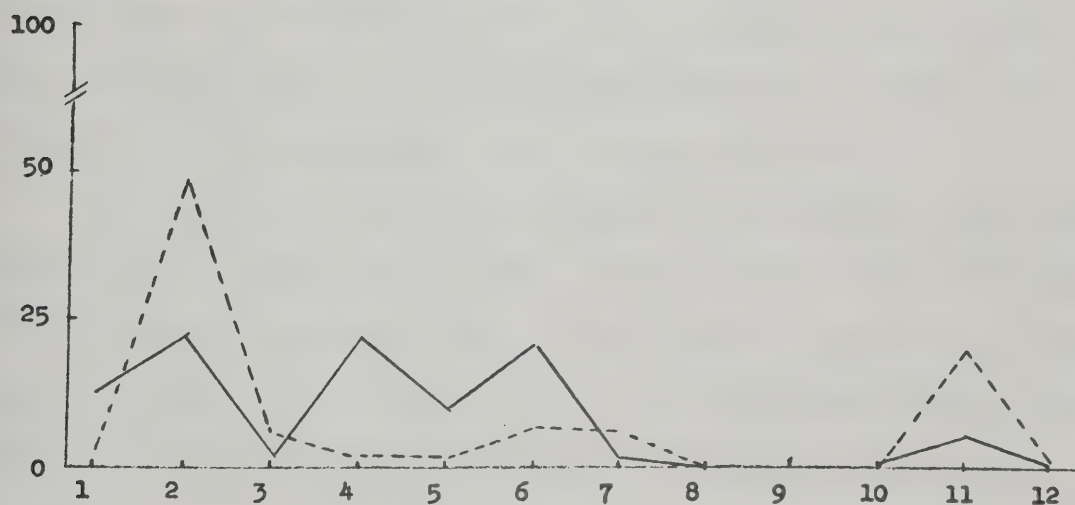
The Bales Analysis (Figure 8) shows the contributing social interaction acts as being: Category 2 - Dramatizes, Categories 4, 5, and 6 (Gives suggestion, opinion and information), and Category 1 - Seems friendly, and Category 11 - Shows tension. The group profile has two significant contributing acts: Dramatizes, and Shows tension, with lesser contribution from Category 1 - Seems friendly.

Lesson Topic - Fred was attempting to teach us the cultural differences between 'hello' and 'good-bye' in the languages of Swahili and English. To do this, he involved the group in demonstrations on how to use and pronounce the words, and role play between different people using the terms (i.e. between father and son, brother and sister, and business acquaintances). A good deal of the lesson was also devoted to his own experiences with the language and the people.

During the post-test, Fred involved the group members in extended role-play. He faded out some of his own experiences illustrating cultural differences, and relied on the



(a) Pre-Test



(b) Post-Test

Key:

- | | |
|-----------------------|-----------------------|
| 1 - Seems friendly | 7 - Asks information |
| 2 - Dramatizes | 8 - Asks suggestion |
| 3 - Agrees | 9 - Asks opinion |
| 4 - Gives opinion | 10 - Disagrees |
| 5 - Gives suggestion | 11 - Shows tension |
| 6 - Gives information | 12 - Seems unfriendly |

Figure 8 - Bales Social Interaction Profile: Percentage Breakdown
Case #4, Fred - Control Group #2

group's role play to 'demonstrate' and lead to further discussions.

Post-Test

In Time Block #1, Fred's highest contributing operant was the submissive control autoclitic. The tact and extended tact combined for an equally high 29%, followed by the mand (19%) and the intraverbal (13%). A further 10% was recorded by the positive, negative, and dominant autoclitics. The group profile includes submissive autoclitics (58%), tact (30%), and the intraverbal 6%. It is interesting to note the possibility of a 1:1 relationship between teacher and group in the tact/extended tact operant category.

In Time Block #2, Fred is primarily engaged in the dissemination of information (44%). He maintains the attention of the group through the use of the dominant autoclitic (11%), the tact (14%) and the mand (6%). He also demonstrates his interest in the group with positive affective autoclitics, informative and submissive autoclitics, and echoics (combined total of 23%). Noticeably absent is any use of negative affective autoclitics throughout the entire lesson. The group responses are concentrated in the submissive operant category, although 8% are intraverbals, and 4% tacts. Again, we see the 1:1 ratio between teacher and group in dominant autoclitic usage.

Time Block #3 shows an increase in submissive operants

(23%). The highest contributing category was the tact (39%). Also contributing was the mand (8%). The group profile was extremely varied in this segment. Forty-six percent of the operants were submissive, 15% were intraverbals, and 6% were mands. Equally represented were the remaining operants (total of approximately 23%). This time segment indicates an interactive and dynamic learning environment, with group communication expressed through a maximum number of operants.

Time Block #4 again shows a preponderance of teacher responses in the tact/extended tact category. Equally represented were the mand, positive autoclitic and dominant autoclitic. The group profile is concentrated in the tact, intraverbal and submissive categories. It is noted that the group used the tact and the intraverbal as their main avenues for communication in this lesson.

Time Block #5, again shows Fred utilizing the mand and tact categories extensively, followed next by the submissive autoclitic and then the intraverbal. The group operant profile (mands, tacts, positive autoclitics) indicates continued interest and interaction.

The Bales' analysis for Fred's post-test performance shows equal distribution across categories 2 - Dramatizes, 4 - Gives suggestion, and 6 - Gives information. Also contributing was Category 1 - Seems friendly, and to a lesser extent, Category 11 - Shows tension. The group profile consists almost entirely of Category 2 - Dramatizes, and Cate-

gory 11 - Shows tension.

In summary, Fred uses the mand/tact/extended tact combination 41% of his teaching time in the post-test, and 36% of his teaching time in the pre-test. It appears that the reason for an improvement between pre- and post-test is not simply an increase in submissive autoclitics for the teacher in the post-test. Of more importance is the group usage of this increased interaction time: they also communicate primarily through the same combination of mand/tact/extended tact when given an opportunity!

Single Case Study # 5

Denis was a member of the Experimental Observer Group. In terms of classifications, his pre-test and post-test performances are considered examples of poor and good teaching respectively. His ratings on the Teacher Effectiveness scales were as follows:

	<u>Cognitive</u>	<u>Affective</u>	<u>Overall</u>
Pre-test	2.65	2.6	2.57
Post-test	3.29	3.36	3.4

Table 22 shows Denis' pre-test and post-test performance as coded by the McLeish/Martin system. Figure 9 shows Denis' pre-test and post-test performances as a function of the operant categories and blocks of time. Appendix VI, Figures I and J, gives the pre-test and post-test percentage breakdowns for each operant over the four blocks of time.

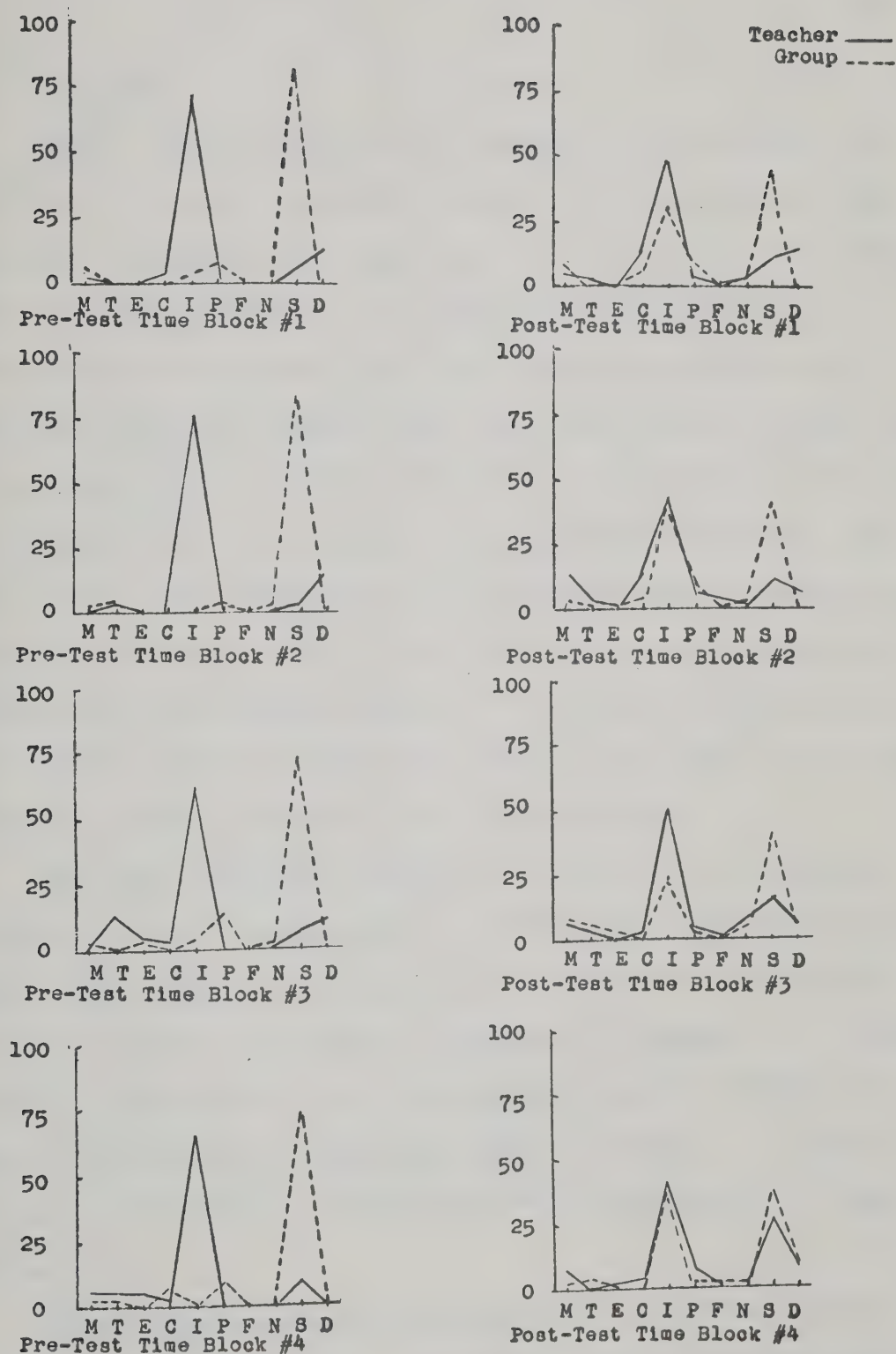
TABLE 22

McLeish/Martin Operant Analysis - Frequencies
Case #5 - Denis - Experimental Observer

Operant	Time Block								Totals	
	1		2		3		4			
	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp
(a) Pre-Test										
M	2	5	1	3	1	3	3	2	7	13
T	1	1	2	4	10	1	3	2	16	8
E	0	0	1	0	4	3	3	0	8	3
C	3	0	1	0	2	0	2	3	8	3
I	57	2	61	1	49	3	33	1	200	7
P	1	6	0	4	0	10	1	5	2	25
F	0	0	0	0	0	0	0	0	0	0
N	0	0	0	2	0	2	0	0	0	4
S	5	65	3	66	5	58	5	37	18	226
D	10	0	11	0	9	0	0	0	30	0
Totals	79	79	80	80	80	80	50	50	289	289
(b) Post-Test										
M	4	7	10	3	5	6	4	1	23	17
T	2	0	2	1	3	5	0	2	7	8
E	0	0	1	0	1	2	1	0	3	2
C	10	5	10	3	3	1	2	0	25	9
I	38	24	34	31	39	20	20	19	131	94
P	3	8	5	7	4	4	3	2	15	21
F	0	2	3	1	1	0	0	1	4	4
N	3	0	1	2	7	4	0	1	11	7
S	9	34	9	32	13	33	12	17	43	116
D	11	0	5	0	4	5	4	3	24	8
Totals	80	80	80	80	80	80	46	46	286	286

Operant Key:

M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Intraverbals
P - Positive Autoclitic; F - Informative Autoclitic; N - Negative
Autoclitic; S - Submissive Autoclitic; D - Dominant Autoclitic



Key: M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Intraverbal; P - Positive Autoclitic; F - Informative Autoclitic; N - Negative Autoclitic; S - Submissive Autoclitic; D - Dominant Autoclitic

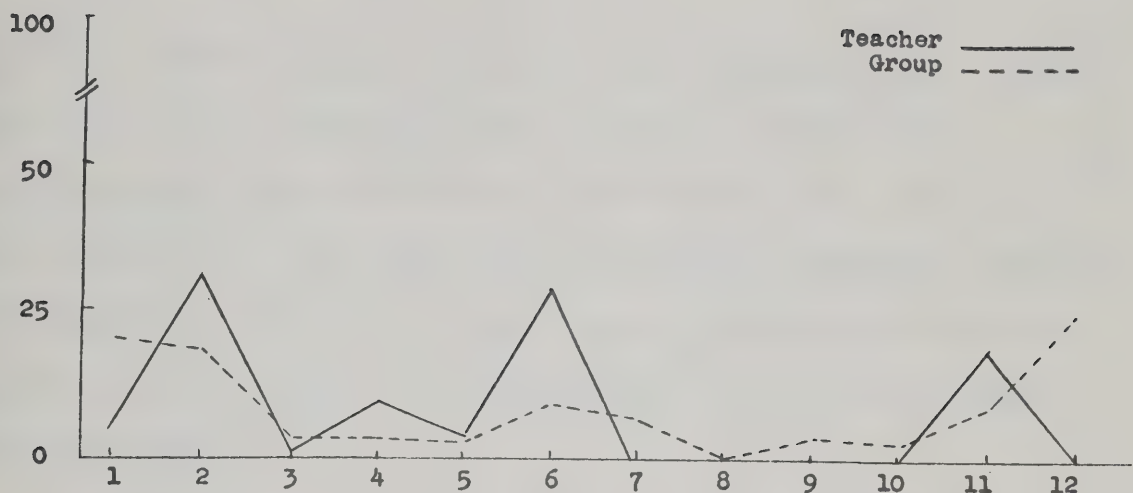
Figure 9 McLeish/Martin Operant Profile Percentage Breakdown
Case #5, Denis - Experimental Observer

Pre-Test

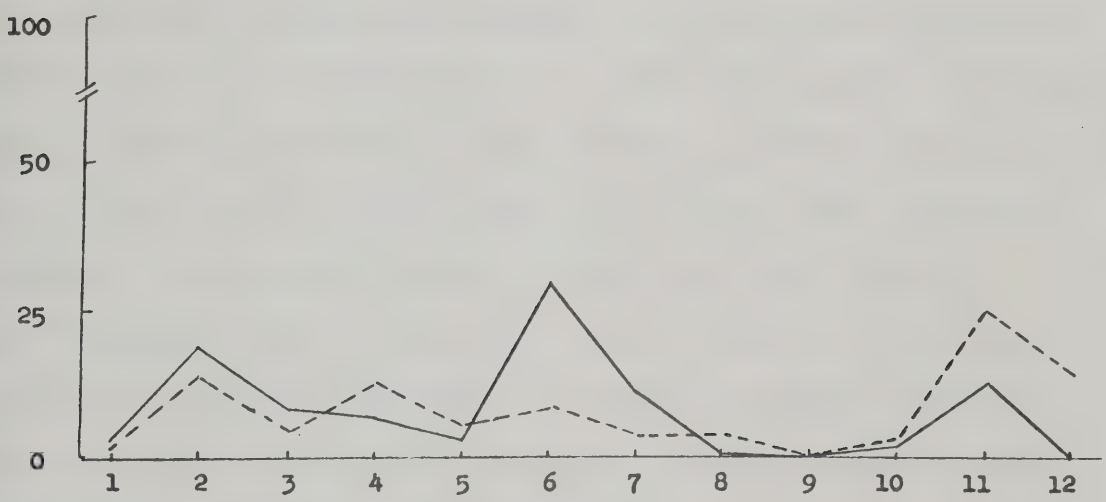
Denis' operant profile is similar in Time Blocks #1 and #2. He uses an extensive number of intraverbals (74% average), combined with dominant control autoclitics (14%). The group, in addition to the expected preponderance of submissive autoclitics, also uses the mand operants and positive affective autoclitics. In Time Block #3 Denis shows an increase in the use of tacts and a corresponding decrease in intraverbals. The group emits increased positive operants (13%), but contributes little in the task-related area (mand/tact/intraverbal). Other than a slight increase in mands, and a noticeable absence of dominant control autoclitics, Denis' profile remains the same in the last time block. The group profile shows no noticeable change.

The Bales analysis (Figure 10) shows an even distribution of acts in categories 2 - Dramatizes, and Category 6 - Gives information. Also making a significant contribution to Denis' social interaction profile is Category 11 - Shows tension. The group social interaction profile shows the major contributing categories to be: Category 1 - Seems friendly, Category 2 - Dramatizes, and Category 12 - Seems unfriendly.

Lesson Topic - Denis' presentation concerned insect collection. His main points were: preparation for the field trip (i.e. to collect the insects), and how to catch the



(a) Pre-Test



(b) Post-Test

- Key:
- | | |
|-----------------------|-----------------------|
| 1 - Seems friendly | 7 - Asks information |
| 2 - Dramatizes | 8 - Asks suggestion |
| 3 - Agrees | 9 - Asks opinion |
| 4 - Gives opinion | 10 - Disagrees |
| 5 - Gives suggestion | 11 - Shows tension |
| 6 - Gives information | 12 - Seems unfriendly |

Figure 10 - Bales Social Interaction Profile: Percentage Breakdown
Case #5, Denis - Experimental Observer

insects, how to prepare them for identification, etc. Denis' pre-test lesson suffered from excessive use of jargon, inappropriate use of the board, chalk and ruler, and lack of organization. The post-test was better organized, use of the board was relevant, a small insect collection was circulated to the class, and information was given in jargon-free language.

Post-Test

The most significant changes in Denis' operant profile were a decrease in intraverbals, and an increase in the mands and positive autoclitics. An increase in echoics and positive affective autoclitics was also noted. The use of the dominant autoclitic, except in the first time segment, decreased from that in the pre-test. The use of the submissive autoclitic decreased. The group profile changed largely in the area of decrease of submissive autoclitics and increase in intraverbal operants.

The Bales Interaction Analysis shows Denis' peak category to be Gives information. This is followed by Category 2 - Dramatizes, and Category 11 - Shows Tension. Category 3 - Agrees, and Category 4 - Gives suggestion also contributed. The group social interaction profile consisted of Category 11 - Shows tension. A group pattern similar to that of the teacher was observed in Category 2 - Dramatizes, Category 3 - Agrees, and Category 4 - Gives suggestion. In gen-

eral the group profile was varied, with contributions made in all categories except Category 9 - Asks for suggestion.

Single Case Study #6

Reg was a member of the Experimental Participant group. In terms of classification, his pre-test performance is considered a poor example of teaching, while his post-test is considered good.

Table 23 shows Reg's pre-test and post-test performances as coded by the McLeish/Martin system. Figure 11 shows Reg's pre-test and post-test performances as a function of the operant categories and blocks of time. Appendix VI, Figures K and L show the pre-test and post-test percentage breakdowns for each operant over the blocks of time.

Pre-test

Segment #1 of Reg's performance shows 78% of the operants concentrated in the intraverbal category, with 10% in the dominant autoclitics. The group responses are entirely submissive. Segment #2 is very similar to the first block of time. Reg's profile is slightly less varied in that his intraverbals have increased and the informative autoclitics have been eliminated. Again, the group responses fall within the submissive category. A minimum amount of interaction is observed in the third time segment, with only 6% of Reg's operants being submissive, and 4% of the group operants being intraverbals. Reg increases his mands in the last time seg-

TABLE 23
McLeish/Martin Operant Analysis - Frequencies
Case #6 - Reg - Experimental Participant

Oper- ant	Time Block										Totals	
	1		2		3		4		5			
	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp	Tchr	Gp
(a) Pre-Test												
M	0	0	0	0	1	1	4	0			5	1
T	4	0	0	0	0	1	0	1			4	2
E	1	0	3	0	0	0	0	0			4	0
C	0	0	0	0	0	0	0	0			0	0
I	61	0	70	0	69	3	63	1			263	4
P	1	0	1	0	1	1	0	2			3	3
F	3	0	0	0	0	0	1	0			4	0
N	0	0	0	0	0	0	0	5			0	5
S	0	78	0	80	5	74	0	64			5	296
D	8	0	6	0	4	0	5	0			23	0
Totals	78	78	80	80	80	80	73	73			311	311
(b) Post-Test												
M	0	0	0	3	0	4	0	3	0	1	0	11
T	5	0	1	0	1	0	0	1	0	0	7	1
E	0	0	0	0	0	1	0	1	0	0	0	2
C	0	0	1	0	0	0	0	0	0	0	1	0
I	69	0	48	20	60	5	67	6	12	1	256	32
P	0	0	3	0	2	0	2	2	0	2	7	4
F	0	0	1	2	2	0	2	1	0	0	5	3
N	0	0	2	4	0	1	0	1	0	2	2	8
S	0	80	19	50	6	68	4	65	1	7	30	270
D	6	0	5	1	9	11	5	0	0	0	25	2
Totals	80	80	80	80	80	80	80	80	13	13	333	333

Operant Key:

M - Mand; T - Tact; E - Extended Tact; C - Echoic; I - Intraverbal;
P - Positive Autoclitic; F - Informative Autoclitic; N - Negative
Autoclitic; S - Submissive Autoclitic; D - Dominant Autoclitic

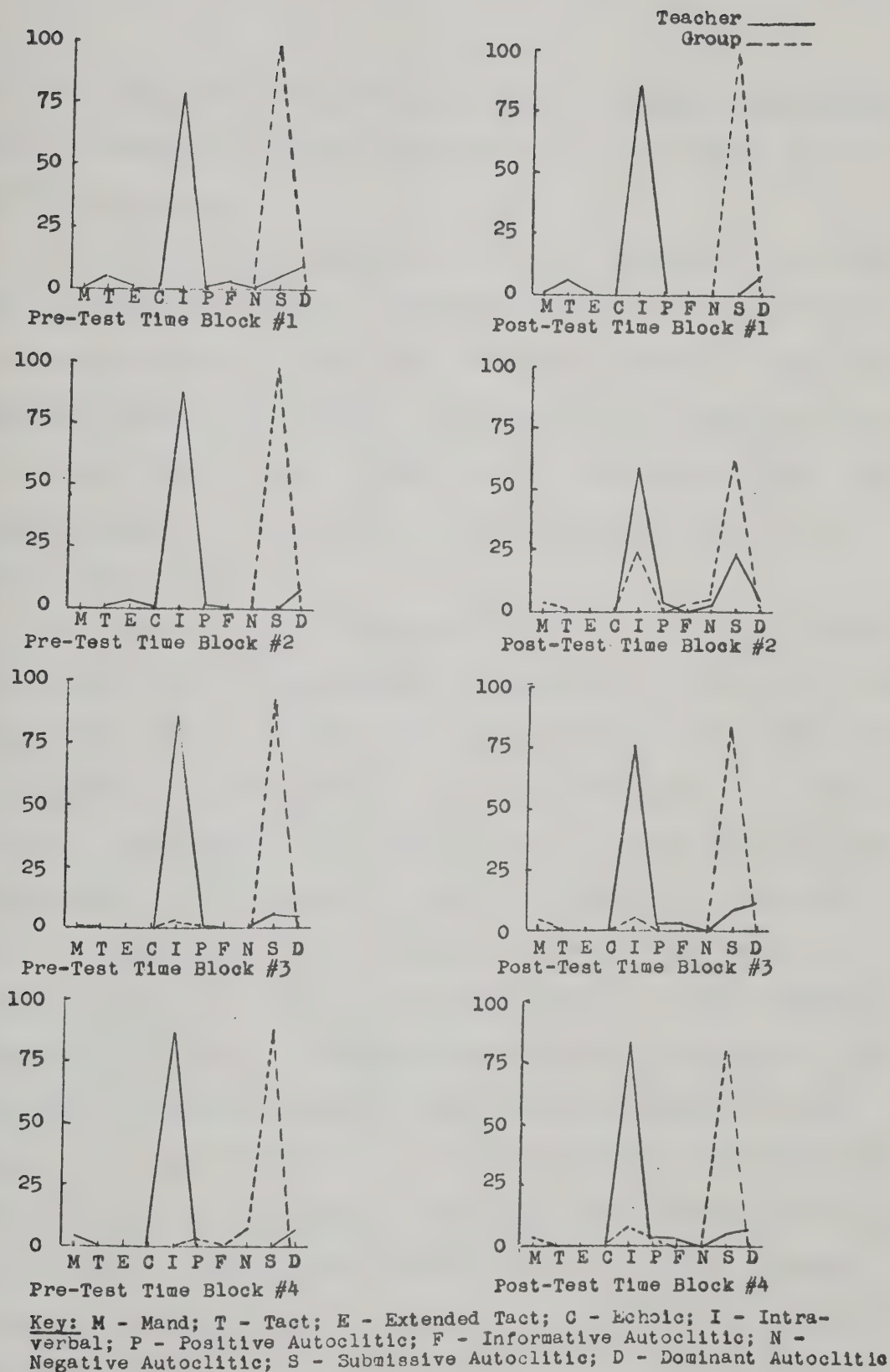
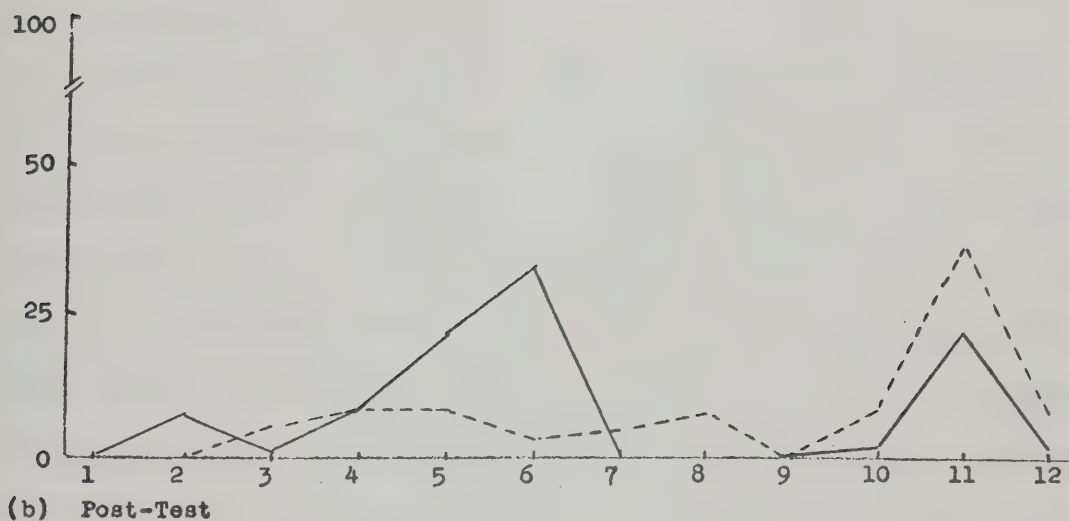
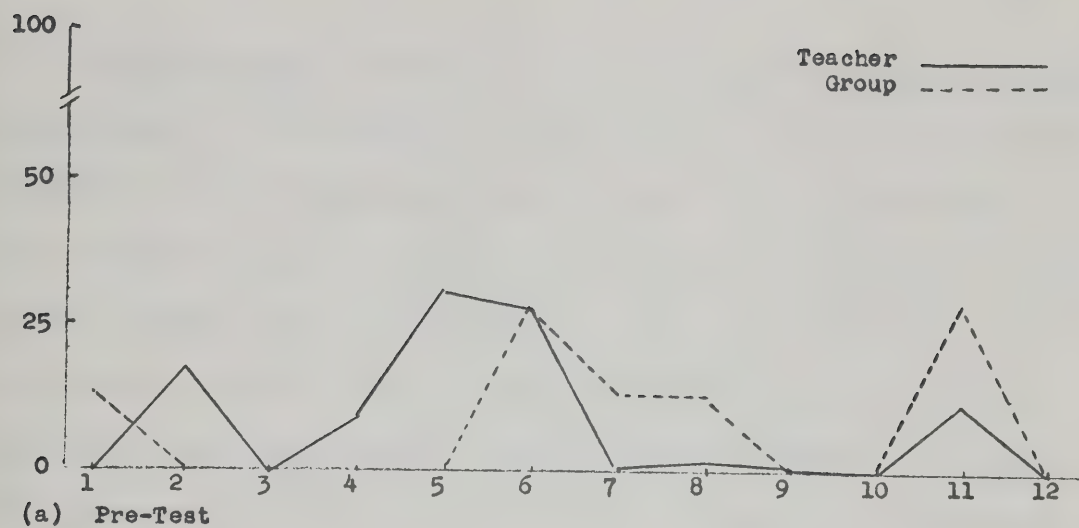


Figure 11 McLeish/Martin Operant Profile Percentage Breakdown
Case #6, Reg - Experimental Participant

ment (5%) but the group does not respond except non-vocally, where the negative affective autoclitic contributes 7% to the group profile.

In summary, Reg acted as a passive disseminator of information, with some control generated through his use of the dominant autoclitic. The group does not respond except with negative autoclitics during the lesson, even when Reg tries to involve them by use of mands in the last time block. The lesson appears to have facilitated disruptive negativism within the group.

The Bales Analysis (Figure 12) shows 70% of the social interaction acts concentrated in Categories 4, 5, and 6 (gives suggestion, gives opinion, and gives information), with 18% in Category 2 - Dramatizes, and 12% in Category 11 - Shows tension, nervousness. The group profile shows 50% of their emitted acts in Category 6 - Gives information, Category 7 - Asks for information, and Category 8 - Asks for opinion. Fifteen percent of the acts were friendly, and 28% tension release. This is an interesting profile: it appears that Reg did not follow-through on the questions asked by the group. We also see that the tendency towards negative autoclitics shown by the group in the last time block were not unfriendly or disagreement behaviors, but tension release which could include bored gestures, inattentive body position or eye contact.



Key:

- | | |
|-----------------------|-----------------------|
| 1 - Seems friendly | 7 - Asks information |
| 2 - Dramatizes | 8 - Asks suggestion |
| 3 - Agrees | 9 - Asks opinion |
| 4 - Gives opinion | 10 - Disagrees |
| 5 - Gives suggestion | 11 - Shows tension |
| 6 - Gives information | 12 - Seems unfriendly |

Figure 12 - Bales Social Interaction Profile: Percentage Breakdown
Case #6, Reg - Experimental Participant

Lesson Topic - Reg gave an introductory lecture on the principles of Transcendental Meditation. The pre-test was delivered at an extremely rapid pace, with little direct eye contact with the group, and increased references to his notes as the lesson progressed. The lesson was not well-organized, and was not completed within the time limits. The post-test was better organized and involved the group to a greater extent, as the following analysis indicates.

Post-Test

Reg's first time block shows little change from his pre-test performance. Most of his remarks fall in the intra-verbal category, with control aided by his use of the dominant autoclitic. The group is submissive. During this time period, Reg is introducing his lesson. The group, although submissive, shows interest in this information, and in time block #2 they initiate interaction by the use of the mand and the informative autoclitic. Twenty-five percent of their operants are intraverbals, and 5% are negative autoclitics. Their submissive autoclitics are reduced to 63%, the lowest count in this category in the entire lesson. Reg's intraverbals reduce to 60% and his submissive autoclitics increase to 24%. This second period is the most active and productive in the lesson. Time Blocks #3 and #4 show some evidence of mands, and intraverbals from the group. Reg's profile is concentrated in the intraverbal category, with continu-

ing use of the dominant autoclitic, and occasional use of the positive and informative autoclitics. Although this performance was judged an improvement over the pre-test, we can see Reg's strategy excludes the use of the important communication operants.

The Bales analysis for the post-test performance Figure 12) shows most of Reg's acts concentrated in Category 6 - Gives information. There is also a reduction in the number of acts in Category 5 - gives opinion, a reduction in Category 2 - Dramatization, and an increase in Category 11 - Shows tension. The group profile is more varied than in the pre-test. There is an increase in the amount of acts in Category 11 - Shows tension.

Summary

A number of observations emerge from the above results:

(1) Teaching-effectiveness is a function of a varied operant profile for both the teacher and the group.

(2) Effective teaching does not require overt group interaction given that the operant profile of the teacher is varied so as to include as a significant contributing factor the mand/tact/extended tact operant combination (hereafter referred to as the fundamental communication operants).

(3) Dynamic communication occurs when the group profile shows a patterning similar to that of the teacher: i.e. a reciprocal pattern.

(4) Various combinations of autoclitics with the fundamental communication operants often increases the efficacy of lesson presentation. Autoclitics are effective when augmenting the functions of one or more of the basic communication operants: e.g. the dominant control autoclitic is often used with the mand as a control and attention device.

(5) Autoclitics may be combined for maximum effectiveness: e.g. the controlling submissive autoclitic in combination with the positive affective autoclitic and the echoic, is indicative of teacher-support, attention and approval.

(6) Positive affective interaction is not merely a function of high frequency occurrence of positive affective autoclitics on the part of the teacher (although there are occasions when this direct relationship is observable). More often, positive affective interaction is generated in the group through the emission of the fundamental communication operants by the teacher. This indicates that the group as a whole reacts favourably to a teacher who demonstrates his interest in the class and the subject by the appropriate use of mands, and by the elaboration and extension of basic information (intraverbals) through the tact (anecdotes, sharing etc.).

(7) The less adequate ('poor') teacher possesses an extremely narrow operant profile throughout the entire lesson. Maximal concentration is on dissemination of information

through the intraverbal operant, with control obtained through use of the dominant autoclitic. The class is given no opportunity to be involved, and therefore is soon extinguished. The better teacher may also use extensive intraverbals to serve the function of information dissemination. However, he never allows this operant to continue without an input from other operants which attract the attention of the class, maintains their interest, and involves them vocally or non-vocally.

(8) There is a patterning effect over time (a variation of operant combinations) depending on whether the time period is devoted to introducing the topic, elaborating on previously given information, group discussion, or summarization. That is, the operant profiles over time are related to the lesson plan, and the teacher's ongoing evaluation of instructional objectives.

(9) The operant profiles for the teacher and the group are uniquely determined by the particular learning sequence. They are a resultant of task, topic, methodology, individual differences in entering behavior and communication patterns. However, a predictable set of contingencies does evolve over time, depending on the discriminative stimulus, the response emitted in the here-and-now, and the effect of both elements on the environment as a whole.

(10) The Bales analysis does not adequately break down the teaching act. As a formal or descriptive observation

technique it is unable to perform a universal function. However, as part of a package including the Teacher-Effectiveness analysis, and the McLeish/Martin functional analysis, this system of analysis can provide an important element in the evaluation of the teaching-learning environment. For example, the combined results from the Bales and McLeish/Martin analysis indicate that 'shows tension' (Category 11 in the Bales analysis) need not be functionally debilitating. That is, whether or not a particular behavior has a predictable, controlling relationship in the learning environment depends on its function in that environment and not on its occurrence alone. It is further hypothesized that some of the acts in the Bales category 'shows tension' are reflected and used to advantage, in the tact and extended tact, and that only a portion of it is perceived by the group as negative.

(11) The format of the modified Martin (1973) procedures in coding (focussing on the salient or essential operant) can be used in meaningful comparisons with the Bales and Teacher-Effectiveness data. That is, this three-second salient operant analysis can be used as a feedback technique in a skills training program. Such procedures would permit the demonstration to the student teacher of the meaning of 'appropriateness' of skills utilization as opposed to a more quantitative frequency-count. The appropriateness aspect is a basic feature of the instructional module per se, and of the

Teacher-Effectiveness instruments.

(12) The operant profile provides us with the opportunity of operationalizing the functional strategies of the teaching act. This profile reveals the way the teacher shapes the learning process (i.e. engineers its facilitative or debilitating efficacy) by initiating or responding to a variety of functional operants.

(13) The above trends support the general findings by McLeish and Martin (1975) in their analysis of a relatively unstructured learning system. That is: (i) reinforcement potential is the result of the discriminative use of verbal operants; (ii) positive reinforcement operates to a much greater extent than negative reinforcement to shape the responses of human subjects in social interaction; (iii) reinforcement is a dynamic process; (iv) learning consists of a multiple input of variables, but following on a systematic, empirical observation and analysis this is found to break down into predictable ordered contingencies.

The implications of these conclusions will be discussed in the final chapter.

CHAPTER V

DISCUSSION

Overview

The format of the discussion section will be consistent with the three related but independent aspects of this research: micro-training in affective communication skills; teacher-effectiveness; and the functional aspects of communicative behavior. The micro-training aspects will be treated separately from the latter aspects. This separate treatment reflects the applied and research outcomes of the study.

I - Micro-training

Instructional module - Results support the incorporation of the instructional module as a vehicle for training student-teachers in the appropriate use of communication skills in the classroom. Although the module focusses primarily on affective communication skills, sufficient preparatory materials are included to deal with cognitive and methodological skills.

Instruction manual - The manual is a basic framework for the course, and provides the means for a flexible approach by individual instructors. The instructor may find, for example that time restrictions do not allow for in-class discussions of the theoretical issues contained in the first five sessions. The manual is sufficiently complete that the

class could read these materials on their own time. Class activities would therefore be limited to a minimum number of general discussions, with maximum emphasis on demonstration sessions and workshops.

Observational Instruments - Both the rating scales and the response-count sheets for the affective communication skills, and the teacher-effectiveness scales used in the micro-teaching workshops, proved to be relevant and effective techniques for training student-teachers in the discrimination, evaluation and assessment of the appropriate use of various communication skills in the classroom. These observation instruments are based on operational definitions of specific skills outlined in the instructional manual. The student-teacher therefore has an objective set of criteria which allow not only for individual assessment and evaluation, but also for meaningful comparison and discussion amongst the class members. Both the student-teacher demonstrating the skills, and the student-teachers analyzing the performance, benefit from this meaningful feedback.

The stress throughout the manual, and especially noted on each observation sheet, is on the appropriate use of the skill. The teacher-effectiveness question is not one of relating the occurrence of descriptive categories of behaviors to learning (the quantitative issue), but is rather one of relating the salience of emitted categories of behavior to

the total learning environment (the functional issue). The question of appropriateness and the functional aspects of behavior are synonymous.

The Bales' observation system, as utilized in this study, did not prove useful as an observational training technique relating to specific skills acquisition. In retrospect, this result is not unexpected. The Bales system is complex and requires many hours of training which we were not able to supply given the time restrictions of the course. The use of the Bales' system was restricted to two members of the observer group, the other four members using the response count and rating scale observation sheets respectively. The Bales system was not used in observing micro-teaching behaviors. It is suggested that the observers would have benefitted from using all three observation techniques. A simplified version of Bales, as contained in the present manual (see Appendix I,) would make the class aware of the social interaction aspects involved in individual skill usage. However, it does not substitute as a discrimination technique in skill acquisition. Rather, it is a complementary system when used in concert with the specific skill cluster rating systems, or with the teacher-effectiveness scales. With only the minimum amount of training given, the two observers were unable to relate in any meaningful way the results of their Bales' analyses to the teacher-effectiveness ratings. To make such a comparison meaningful assumes

equal facility with the use of the rating systems and the theoretical underpinnings of the systems. The main difficulty in providing meaningful input from the Bales analysis, even with extended training, again relates to the difference between descriptive and functional aspects of behavior.

Teacher-Effectiveness Scales - Validity Check. In assessing each 15-minute tape, it will be recalled that the official raters were asked to make detailed comments during their actual observation of the tape. These notes were to be referred to when making their official judgment, in conjunction with the operationalized definitions and criterion levels. A content breakdown of these notes for all seven raters across all pre- and post-tests, indicates that the criteria noted by the judges are compatible with the written criteria advocated in the instructional manual. That is, the criteria arrived at empirically by this research worker and outlined in the instructional manual, accurately reflect the categories deemed important by individual raters.

An additional set of criteria related to individual teaching methodologies and subject matter might prove helpful to students, but it is suggested that the conceptual framework for rating teaching-effectiveness remain unchanged from the form contained in the manual. It is the contention of this research worker that if the operational definition of the teacher-effectiveness scales and criterion levels

become too descriptive and mechanical (i.e. approaching a checklist) this would have the effect of excluding the user from active participation (decision-making) in the observation judgment. Observation instruments containing numerous skill descriptors suffer from two major defects: the exclusion of innovative behaviors, and the assigning of equal weights to frequent and infrequent behaviors. The student should have valid signposts to prevent him from deviating from established checkpoints of teacher-effectiveness, but the declared criteria should not restrict his own interaction with the instrument and the ongoing behaviors.

Experimental Group - Roles

Our experience with the above research design (dividing the experimental group into observer, participant, and assessor/observer roles) indicates that there are no differences in learning occurring through either actual practice and involvement in the micro-training blocks, by observing and providing feedback to the demonstrators, or by a combination of these roles. This important finding allows the instructor flexibility in scheduling his workshop activities. For example, an ideal instructional situation would involve the student-teacher experiencing each role for each set of skills. However, if time restrictions prevent this, the instructor could rotate the roles of the student-teacher for each set of skills.

Use of the Video-tape

Although television is not a necessary component in micro-training, our experience indicates that there are many advantages to be obtained from this device. It allows the student-teacher to discriminate and acquire basic information and knowledge about skill application. It is helpful in initial learning, and in accelerating the learning process. It is the basis for meaningful feedback from a group, or individual. It also provides a comparison of progress over time. Finally, video-tapes are a permanent record of behavior and can be used in a variety of teaching-learning situations.

Limitations of the Study

That we were able to obtain definitive results is a tribute to the efficacy of the micro-training technique in less than ideal conditions! In addition to the major limitation of time mentioned earlier, we were also plagued by equipment breakdown and inadequate classroom facilities. Unfortunately, we were not able to acquire a large enough room for the conduct of the course: the resultant crowded conditions detracted somewhat from the benefits of a workshop environment.

Another limitation--a function of the design itself--was the negativism generated by splitting the class into different groups. Some members of the observer group complained about the difficulties in using the observation forms

(primarily the Bales system), and their non-involvement in the micro-training blocks of skill applications. Conversely, some of the participants complained that they felt uneasy at the constant barrage of criticisms and observations. As mentioned, ideal conditions would feature maximal participation by all members of the class in the skill application blocks and in the observation training.

A third limitation of the study was that the post-test lessons occurred during the last week of classes when the students were burdened with assignments and examinations from other courses. This contrasted with the relaxed atmosphere existing during the pre-tests taken at the beginning of the term.

One effect of training in the affective domain is that performance feedback is initially received and given with a greater affective impact than instructional benefit. This general uneasiness in dealing with affect is a function of our socialization process. Many of us have effectively learned to suppress our affective communication skills. For these individuals, the experience of learning to apply affective skills plus learning how to give and receive affective criticism promoted feelings of uneasiness and anxiety. Although it is relatively painful for students to work through this period of frustration, the experience emphasizes the importance of affect in communication for each indi-

vidual. As the course progressed, the class acquired a greater facility in expressing, controlling and understanding their feelings, and experienced a minimal amount of uneasiness and anxiety.

In order to prepare the class for the probable occurrence of this initial period of anxiety and negativism, the instructor should discuss the above mentioned aspects at the beginning of the course. The success of the course rests to a large extent on the sensitivity and understanding of the instructors, on their ability to cope with the affective aspects of learning, and on their ability to model the affective communication skills during all aspects of the course.

Course Evaluation - Appendix VII summarizes the positive and negative aspects of the course as evaluated by the participants and observers. In general, the course was judged to have been a valuable experience. Most of the negative criticisms relate to the limitations above noted.

Implications for future research and application - Ideally, micro-training should be an integral aspect of curriculum instruction and teacher training so that one half-year course does not have to bear the burden of instruction in all aspects of micro-training! We believe that micro-training in the affective communication skills should be incorporated as early as possible in the student-teacher's academic program. That is, equal emphasis should be given to the acquisition

and development of affective skills as is given to cognitive skills.

The key to success in micro-training is a systematic, organized, well-planned sequence of instructional events combined with built-in flexibility to meet the needs of individual students and provision for continuous updating. Development of an instructional module should follow the steps outlined in this study, summarized as follows: (i) in the planning stages a list of integral concepts needed as pre-requisites for the workshops should be delineated; (ii) target skill clusters should be outlined, and descriptions of the functions, uses, and misuses of the skills formulated; (iii) design of the micro-training block should be outlined, with emphasis on such things as maximum techniques to relay feedback to the person practicing the skills and the number of opportunities provided in which to improve the skills or the criteria to be attained before proceeding to the next skill sequence; (iv) the manual should incorporate instructional objectives, summarization of main points, examples of concepts, self-tests or mastery tests, provision for independent study (references), and maximum opportunity for interactive use of the instructional materials by the student. A detailed schedule of activities should be incorporated in the manual, and provision for physical facilities, audio-visual equipment, instruction and technical personnel

specified; (v) As with the manual, the module should contain a variety of activities for the learner, all of which take the form of the micro-training paradigm; (vi) Pilot studies will be necessary for all aspects of the module, and the feedback obtained from students on the efficacy of these initial attempts is extremely helpful in working towards a functioning module.

Although the initial development of an instructional module is time-consuming, the benefits accruing to both instructor and students are worthwhile. With the module validated, and needing little more than updating when necessary, the teacher is then free to spend more time interacting with students, creating a dynamic learning environment, providing feedback, and being available for consultation.

Before proceeding to investigate areas for further research, it will be helpful to again delineate the results of this study.

First of all, we have been able to extend the principles of learning [as applied by Allen & Ryan (1969), Borg (1970), Ivey (1971) and Gluckstern and Ivey (1974)] to the design of an instructional module focussing on skills-training in affective communication, to be used by instructors and student-teachers in the applied portion of the teacher-education program. The manual designed for the above pur-

pose has passed through the developmental stages, and has proven to be an efficient framework for micro-training. The limitations of the study suggest further areas for research, using the manual as the basic instructional tool. We have learned that observation is an integral part of skill discrimination and skill knowledge, and also allows for application of the skills equal to that of actual participation. A preferred arrangement for skill training, however, is to give each trainee the opportunity to practice and improve his skills, thereby improving and enlarging his behavioral repertoire. No claims are made that possession of a number of skills adds up to effective teaching. We do claim, however, that an increased repertoire of potentially helpful skills allows the teacher to become more flexible and able to cope with a variety of events occurring in a 'normal' classroom day. Most importantly, this flexibility allows the teacher more time to monitor the learning process, to provide formal or informal instruction when appropriate, and to involve the students in a rewarding variety of activities. We have trained the student-teacher to become flexible by making him aware of the functional or appropriateness aspects of instruction, interaction, and affective communication.

Secondly, our attempt to operationalize teaching effectiveness into three related aspects: cognitive, affective and overall has been validated by a team of raters using the

scales to evaluate the micro-lessons. The training program designed for the raters utilized the instructional manual, training tapes, small group discussions, and extensive written observations. As with the student-teachers, the focus was on the functional aspects of observable, measurable behavior.

Thirdly, we have shown that a macro-approach to micro-training is an effective way of transferring micro-counselling skills to micro-teaching. Previous pilot attempts had shown that an unstructured approach to some of the more complex of the micro-counselling skills did not allow for integration, and secondly did not allow for transfer to a teaching situation. The decision to operationalize the complex micro-counselling skills in a systematic manner proved successful. The students were able to engage in meaningful application of these skills to teaching methodology once they were familiar with the descriptions, observations, uses and application of the skills in a dyadic situation. The decision to break down teaching methodology into three commonly-used exemplars: the lecture, the lecture-plus-discussion and the seminar gave the students the opportunity to observe and practice the application of affective communication in teaching situations ranging from almost complete control by the teacher to one of equal potential input for both students and teacher.

The first priority in further research in micro-training

concerns the transfer of the target skills to the classroom. In order to ensure that such transfer occurs, however, the microtraining paradigm needs to be expanded within the laboratory setting. One area where this could be done is within the confines of the present instructional module. Rather than attempting to apply the micro-counselling skills to micro-teaching directly, perhaps it would be beneficial to extend the micro-counselling skills to larger groups, while maintaining the problem-oriented role-play situations. The micro-teaching application was concerned mainly with presenting a lesson and using the affective communication skills to create a facilitative learning environment. Thus the transfer step involved both moving to a larger group and also moving to an instructional framework. Within the micro-teaching framework, laboratory practice could also be given to specific subject areas and age groups. In our micro-teaching workshops, the subject area was left to the discretion of the trainee practicing the skills, as was the age group to whom the lesson was directed.

Final laboratory transfer in the micro-teaching workshops would involve the whole class and a longer duration of time. There are many other directions in which transfer could be extended in the laboratory setting. Again, time limitations determine the extent of this type of transfer.

The micro-training concept should also be incorporated

during the time that a student-teacher is practicing in the schools. In this case, video-tapes could be made of a 30-minute lesson, for example, with a class of approximately fifteen students. These tapes could then be assessed by the instructor and the student teacher. The student-teacher would then attempt to improve his teaching methodology. Further video-tapes, a minimum of one per week of student-teaching, would aid in further improvement in skills application.

A library of tapes would be advantageous to instructors. Permission would have to be obtained from the student-teachers, but it has been our experience that most students are willing to donate their experiences to the improvement of the student-teaching practice.

Probably the most difficult of transfer studies to carry out are those involving long term effects. Most student-teachers in their first years of teaching are scattered across the province. Unless funds are available for travelling, follow-up for the research worker becomes difficult. Nevertheless, there will probably be some student-teachers assigned to schools in the areas adjacent to the parent university, and in these cases follow-up should be instituted.

If the micro-training concept expands to departmental use, it is essential that the instructors and supervisors have a common set of criteria on what teacher-effectiveness

is in their own areas. The student-teacher would then not suffer from a confusing number of interpretations. This is especially essential in cases where several instructors are supervising in the same subject area. The basic rules and criteria for teacher effectiveness as outlined in this present instructional module could form the initial framework from which more specific criteria would be developed for a given subject area.

Ideally, the competency-based principle should be extended to the micro-training paradigm. This caters to the individual needs of students. It does not penalize the student who has demonstrated competency in one of the skill clusters, nor does it penalize the student who needs more practice and feedback before she reaches the criterion for competency. The difficulty in arranging for such provision hinges on the availability of 'students' with whom the trainee can practice her skills' application. The solution would probably rest with groups of interested students banding together to continue practicing until each reached the criterion level. This is a rather optimistic plan, however. The most practical solution would be to use the five-step instructional sequence as outlined in this present study as mandatory for all students. Additional practice would be left to the discretion of both students and instructors.

It will be recalled that some success was achieved with a well-structured one day workshop. This workshop was a mini-version of the instructional components used in the extended course. This type of workshop could be applied readily to in-service training of teachers, and in diverse areas such as innovative curriculum approaches, advances in subject areas (i.e. new developments in biology, mathematics, physical education), and refresher courses in instructional techniques, psychoeducational design and communication skills.

An interesting area for a transfer study deriving out of the present research involves the transfer of affective communication skills to written discourse. This is an important area of teaching considering the amount of written reports submitted by the student body. The teacher should be able to help the student in expressing his ideas clearly, in both the cognitive and affective areas. A micro-training program focussing on effective communication in written discourse would equip the student-teacher with a repertoire of skills to aid in this function.

The rater training program, using operational definitions of teacher-effectiveness as contained in three scales, appeared to be effective in improving the agreement between raters. The empirical criteria contained in the instructional manual and the written criteria made by the raters during

observations of the taped micro-lessons were also compatible. A necessary replication of this study would be to train the raters on two sets of tapes, with final judgments on a third 'experimental' set of tapes.

II Teacher Effectiveness - Description and Function

Canonical analyses were conducted between the Bales and Teacher-Effectiveness data to ascertain the maximum agreement existing between these two sets of data. No significant relationships existed between the social interaction categories and cognitive teacher-effectiveness. This was somewhat surprising as there are six task-related social interaction categories which one might intuitively judge to be related to cognitive teaching skills. Significant relationships emerged in the canonical analysis between the Bales and the affective teacher-effectiveness data. The social interaction categories having predictive validity were: appearing friendly, giving suggestions, asking for information, dramatizing, and expressing agreement and disagreement. These social-interaction categories are directly related to individual skills stressed in the affective micro-training, and this finding thus strengthens the claim for training in this domain. For example, asking for information, and appearing friendly are mirrored in the first cluster of basic helping skills. Integrative skills (cluster #4) would incorporate aspects of expressing agreement and disagreement, and of

dramatizing. Overall teacher-effectiveness and the Bales codings correlated significantly on similar patterns of social interaction categories as emerged in the affective analysis. That is, Bales' social-interaction system appears to be related only to the affective and the overall aspects of teacher effectiveness. This is of course, consistent with the original rationale for Bales' system. It was not devised for use in structured instructional settings, but in small group therapy (alcoholics anonymous) or problem-solving situations. The analysis supports Anderson's (1972) contention that Bales' system allows a research worker to conceptualize instruction as an affective process.

We conclude therefore that the canonical correlation must be interpreted with caution. We do not question that Bales' system provides a picture of social interaction as between teacher and class, nor that certain of these acts have predictive validity for teacher-effectiveness. However the predictions are based on descriptive not causal relationships.

This study found that no significant relationships existed between the 16 PF and Teacher-Effectiveness data. This seems to indicate that this particular personality questionnaire has no relation to observable measurable behaviors emitted during the micro-lessons. It does not appear that this avenue of research is a particularly rewarding one, although

it is recommended that this data be gathered on other micro-training attempts in order to confirm these results with this small sample.

The definite results obtained with the McLeish/Martin coding system suggest the need for confirmatory research. The technique provides the explanatory link between the Teacher-Effectiveness data and the functional relationships between communicative skills and ongoing behavior. Modification of Martin's (1973) coding rules emphasizes the salience of an emitted operant in a 3-second time interval. The salient operant profile provides a meaningful and reliable differentiation between the poor, good, and excellent teacher.

The salient operant profile is a device which could be used in teacher training. The information is compatible with the functional approach advocated in the module, and would therefore be useful to the student-teacher. It is not expected that a trainee could learn to use the system during a one half-year credit course in communicative skills training because of the extensive amount of time needed to train individuals to code reliably. However, as a first step it is suggested that supervisors and instructors would profit by learning the system and using it to provide functional criticism to the student-teacher concerned on the basis of a recorded lesson.

It seems clear from the previous discussion that research into teaching effectiveness can make progress only if process and outcome can both be studied in the appropriate way and the functional relationship between them established. The next step would seem to be linking these two kinds of analysis with the gains made by the learner. After nearly sixty years of psychological research in this area, a dim light at the end of a long tunnel has been discerned.

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APPENDIX I

MICRO-TRAINING MANUAL

Affective Communication
Skills in the Classroom

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1976

SCHEDULE OF ACTIVITIES

To the Instructor:

The following schedule of activities is based on twenty-seven $1\frac{1}{2}$ hour sessions, extending over a period of approximately fourteen weeks. You may wish to include all of the sessions listed on the Schedule of Activities, or you may wish to modify and/or extend them. The schedule is flexible and should reflect the needs of your students, curriculum demand, and facilities.

The manual has been used in university level courses with student teachers. Changes have been incorporated as a result of our experiences. It is hoped that the manual will prove beneficial to you in your classroom activities!

You will note that the manual is written as a direct communication to the student-teacher who will be using it. We have not prepared a Teacher's manual to accompany the Student manual. We therefore suggest that you read through the manual, thinking about your own course objectives, scheduling etc. You should then prepare a set of organizational notes for yourself which will list (i) the types of activities per session: lectures, demonstrations, role play, etc; (ii) the scheduled time for each activity; and (iii) details of instructor and/or class involvement.

The manual is organized into three major sections: Sessions 1 to 5 are preparatory sessions which prepare the student for the microtraining workshops. These sessions incorporate the major theoretical and applied information needed before the student enters the skills-based training program. The second and third sections are concerned with Microtraining. Sessions 6 to 16 cover the Microcounselling Workshops. Sessions 17 to 27 cover the Microteaching Workshops.

Good luck with your course!

SCHEDULE OF ACTIVITIES

<u>Session Number</u>	<u>Page Number</u>	<u>Activities</u>
1	1:1 - 1:2	<p>Introductory session Purpose and goals of course Schedule of Activities Use of Manual Suggested text: Brammer, L. M. <u>The Helping Relationship: Process and Skills</u>. Englewood Cliffs, N.J.: Prentice-Hall Inc., 1973. (Book review in Appendix 1) Arrange schedule of 15 minute lesson presentations in Session 2</p>
2	2:1 - 2:6	<p>(Preparatory material: Manual pp 2:2 - 2:6) Basic instructions on lesson delivery A Systems Model of Instruction Principles of Learning Incorporated in Instruction 15 minute lesson presentations</p>
3	3:1 - 3:6	<p>(Preparatory material: Manual pp 3:2 - 3:6) Topics to be discussed: Educational Relevance of Verbal and Non-Verbal Communication; Affective, Cognitive and Psycho-motor Behaviors; Role Play, Simulations, and Games. (Taxonomy of Educational Objectives: Cognitive and Affective Domains, Appendix II) Demonstrations where appropriate Discussion</p>
4	4:1 - 4:17	<p>(Preparatory material: Manual pp 4:2 - 4:17) Topics to be discussed: Observation of behavior in the classroom; Use of rating scales, frequency counts, etc.; Interactional Analysis in the classroom; Function of observers in the micro-training workshops.</p>

<u>Session Number</u>	<u>Page Number</u>	<u>Activities</u>
		<p>Demonstrations</p> <p>Observation of filmed excerpts of behavior in classroom</p> <p>Practice using scales and a modified Bales coding system</p> <p>Function of VTR system</p>
5	5:1 - 5:8	<p>(Preparatory materials: Manual pp 5:2 - 5:8)</p> <p>Topics to be discussed:</p> <p>Microtraining - concept of, uses, etc. (Microteaching, Micro-counselling);</p> <p>Use of lesson plan, behavioral objectives, in designing a 5 minute "micro-lesson";</p> <p>Function of participants in the microtraining workshop.</p> <p>Demonstrations and practice on microtraining technique as it will be used in the workshops: (teach, replay videotape, criticism from group, reteach)</p>
6	6:1 - 6:5	<p>(Preparatory materials: Manual pp 6:2 - 6:5)</p> <p><u>Skill Cluster #1 - Basic Helping Skills</u></p> <p>Discussion of preparatory materials</p> <p>Demonstration using various videotaped segments</p> <p>Demonstration of each skill using the "fishbowl" technique</p> <p>Videotaped replays of interaction</p> <p>Discussion and use of observation forms, scales, etc.</p> <p>Review function of participants and observers</p>
7 and 8		<p>Microtraining Workshop #1</p> <p>Skill Cluster #1 - Basic Helping Skills</p>
9	9:1 - 9:10	<p>(Preparatory materials: Manual pp 9:2 - 9:10)</p> <p><u>Skill Cluster #2 - Selective Listening Skills</u></p> <p>Discussion of preparatory materials</p> <p>Demonstration of skills</p> <p>Application in microtraining format</p>

<u>Session Number</u>	<u>Page Number</u>	<u>Activities</u>
10 and 11		Microtraining Workshop #2 Skill Cluster #2 - Selective Listening Skills
12	12:1 - 12:10	(Preparatory Materials: Manual pp 12:2 - 12:10) <u>Skill Clusters #3 and #4 - Facilitative skills which Encourage Open Expression and Sharing of Personal Experiences: Integrative Skills which Allow for a Final Statement and Resolution of the Classroom Problem.</u> Discussion of preparatory materials
12 and 13		Demonstration of skills Application in microtraining format
14 and 15		Microtraining Workshop #3 Skill Clusters #3 and #4
16		Informal discussion of Microtraining Part I (microcounselling) sessions to date
17	17:1 - 17:10	(Preparatory Materials: Manual pp 17:2 - 17:10) <u>Microtraining Part II - Microteaching</u> Discussion of preparatory materials. Integration of affective communication skills, and application to teaching Discussion of Effective Teaching Teaching Methodology: Lecture, Lecture plus discussion, Seminar Explanation of teacher-effectiveness rating scales Demonstration of skill application to a 5 minute lesson
18		Demonstration of application of skills to three methods of teaching (outlined above) Use of microtraining format
19 and 20		Workshop #4 - Microteaching Application of Affective Communication Skills to Lecture methodology

<u>Session Number</u>	<u>Page Number</u>	<u>Activities</u>
21 and 22		Workshop #5 - Microteaching Application of Affective Communi- cation Skills to Lecture-plus- discussion methodology
23 and 24		Workshop #6 - Microteaching Application of Affective Communi- cation Skills to Seminar metho- dology
25		Informal discussion on Micro- teaching sessions Arrange schedule for Session 26
26		15 minute microlessons (Preparatory materials: pp 2:1 to 2:5)
27		Summarization and recapitulation of course. Assessment. Give back results, etc.

SESSION 1

Introduction:

The purpose of this course is to provide you with the opportunity to acquire those affective communication skills which will be helpful to you in the classroom. The course will combine both theory and application, and includes lectures, group discussions, role-play, simulation activities, and workshops.

The theoretical sessions will introduce you to the concepts of: verbal and nonverbal communication; affective, cognitive and psychomotor behaviors; role-play, gaming and simulation techniques; classroom observation systems; micro-training. Once this basic prerequisite material has been presented, we will then be concerned with an in-depth investigation of affective classroom skills. A series of workshops will allow you to put into practice the theoretical aspects of the course. That is, our twofold aim is to provide you with knowledge about teaching skills in the affective domain, and to ensure that you can use these skills effectively in a classroom situation.

All of the necessary instructional materials are included in this manual. In order for you to receive maximum benefit from the course, we urge you to make active use of the manual and to participate in all of the scheduled activities.

We are looking forward to working with you during this term!

USE OF THE MANUAL

To the Student:

In order to obtain full benefit from this course, you will find it necessary to make active use of your manual. The manual will provide you with a framework for the course. In it you will find the class schedule, preparatory materials for each scheduled session, selected reference lists, and instructional materials for the workshops.

The pages of the manual are numbered to coincide with the session number of the class. For example, if session 3 contains 8 pages, they will be numbered from 3:1 to 3:8. It is suggested that you bring the manual to each session, as we will be referring to the materials during our discussions.

Prior to attending a session, be it a lecture or a workshop, make sure you check your schedule of activities for that date. If you are required to read materials to prepare you for the session, it will be noted in brackets opposite the session number. It is important that you digest these materials, which have been prepared specifically for this course. If you have any questions as a result of reading these materials, we suggest you raise them during the session. You may wish to take notes during the session, as the lectures and demonstrations will be an elaboration of the preparatory materials. Please insert any notes you make in your manual for easy reference.

If you have any suggestions on materials that could be added, deleted, or clarified, please do not hesitate to let us know. Your comments will help us in updating the manual if necessary!

SESSION 2Introduction:

Your major task in Session #2 will be to teach a 15 minute lesson to five of your peers. Your success in this activity will be facilitated if you follow the instructions contained on pages 2:2 to 2:6 of this manual.

These preparatory materials have been broken down into three sections. The first section concerns the structure of the lesson itself. Information in the last two sections should prove helpful in planning your lesson.

Good luck!

1. Preliminary Assessment - 15 minute lesson

One of the aims of this course is to provide you with information and skills which will, hopefully, improve your teaching performance in the classroom. One of the ways in which to assess whether or not improvement (learning) has taken place, is to compare your teaching method prior to and immediately following the formal course. We would therefore like you to teach a 15 minute lesson as your Session 2 activity. We will ask you to reteach this lesson in Session #26.

You should now be arranged in groups of approximately six members, and should have arranged a mutually satisfactory block of time (approximately 1½ hours) during this coming week when your group can meet. Each member of your group will deliver a 15 minute lesson to the remaining members of the group. This lesson will be videotaped for future use by your instructors. You may also wish to view your performance at a later date.

You may choose both the content (subject matter) of your microlesson, and the type of delivery (method). There are several methods that may be suitable: lecture, lecture plus discussion, seminar, demonstration etc.

In order that your group completes their lesson presentations within the 1½ hour time limit, please follow these instructions:

- (1) Make sure your lesson is no longer than 15 minutes! If it is longer, your instructor will simply have to tell you to stop your lesson. We will try to give you some kind of warning at the 12 minute point.
- (2) Make sure your lesson plan is approved by either of your two instructors. This is done most efficiently by simply mapping out the framework of your lesson. Do not submit detailed notes.
- (3) You are allowed to use a summary of your lesson. You will find it most beneficial if you restrict yourself to listing important points on small index cards.
- (4) If you are distributing materials beforehand, make sure they are not too lengthy. If you are using adjunct materials (pictures, flow charts, etc) make sure they are appropriate. If you are using audio-visual equipment, check it beforehand to ensure that it is in good working order.

Critical to your lesson presentation is the formulation of a lesson plan. Your lesson plan should be well-organized, and should include such considerations as: instructional objectives, pre-assessment (entering behavior), instructional procedures, evaluation, timing, etc. The type of method you use will dictate which of these considerations will be included in your plan. For example, evaluation is not appropriate if you are delivering a lecture. It is however appropriate if you intend to combine a lecture with, say, a question and answer period.

There are several references which you may use in formulating a lesson plan (see p 2:6). Please regard both of your instructors as references also, both at this preliminary point in the course and also as the course progresses. The following information may also be of some help to you.

2. A Systems Model of Instruction

A systems approach to instruction has evolved over the last decade from interrelated areas of education and psychology. The model consists of four components, connected by feedback loops. Feedback loops may also connect a series of instructional sequences within each component. The model is illustrated in Fig. 1. The arrows indicate the operation of a feedback loop.

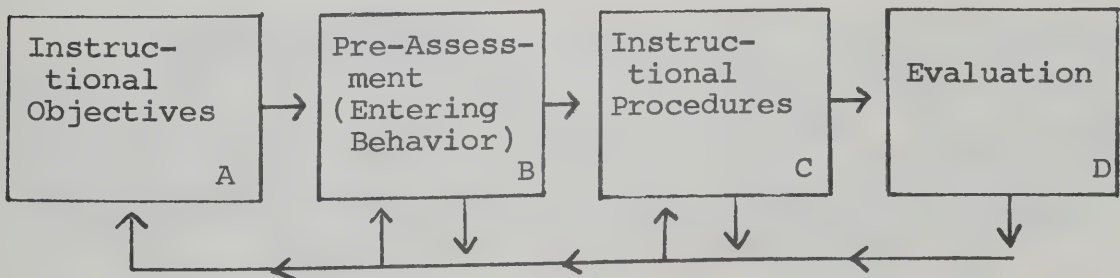


Fig. 1 A Systems Model of Instruction

In addition to feedback (assessment, knowledge of results, follow-up etc.) the system also emphasizes practice, task analysis or breakdown, criterion mastery. The major function of the model as applied to the planning of your lesson is to provide you with guidelines for proceeding through an organized series of steps leading to successful completion of your lesson. That is, you should use the model as a checklist for including or omitting those instructional strategies which are appropriate to your lesson. A brief description of the model follows:

(A) Instructional Objectives. Select a set of objectives which relate to the final goal of your instruction. You may find one or more of the following conditions helpful in formulating an instructional objective that clearly communicates your intended outcome.

- (i) the terminal behavior should be identified. This indicates the kind of behavior that will be accepted as evidence that the learner has achieved the objective;
- (ii) describe the important conditions under which the behavior will occur;
- (iii) specify the criteria of acceptable performance by describing how well the learner must perform to be considered acceptable.

You should always make a complete detailed set of objectives for every lesson you deliver, and for every task you wish your students to master. It is not necessary, however, to convey these detailed objectives to the class. The reason for using instructional objectives in your lesson plan is so that the content is congruent with these objectives. You may find, for example, that a generalized or descriptive statement concerning the instructional objectives of your lesson is sufficient. What you should aim for is an instructional sequence that accurately reflects your instructional objectives. The important thing is to communicate essential and appropriate information in a logical and uncluttered manner!

(B) Entering Behavior (also referred to as Pre-Assessment or Pre-Requisite Learning). Some lessons (or tasks) may not require this step, especially if the content matter is novel or if it requires little background knowledge. If you intend to use a seminar method or group discussion, for example, you would be well-advised to provide the group with some background materials. This allows all participants to prepare themselves, perhaps with a list of general questions.

(C) Instructional Procedures. For our considerations, this is the crucial step in your lesson plan. Included in this component are: (1) selection of available instructional materials (e.g. books, films, flash cards); (2) preparation of new materials where necessary (i.e. the design of a flow chart, construction of a model, etc.); (3) the development of a sequential, organized lesson plan which appears to be most efficient for your stated objectives.

(D) Evaluation. The last component in the instructional system involves assessment of behavior in terms of whether or not it reached the criterion as defined in the instructional objectives. That is, you should be concerned that your lesson facilitated learning! Formal methods of evaluating your

lesson may not be necessary until the end of a unit is reached, at which point a mastery test may be given. There are however several informal ways of testing within a single lesson. For example, perhaps you could give a short true-false, or problem solving test at the end of the lesson. You should then discuss the answers before the class is dismissed to ensure that appropriate feedback is given. You might plan an oral quiz which summarizes the main points, or ask for applications or extensions of the lesson. It is always a good idea to ask the class at various points in your presentation whether they would like you to elaborate further, give more examples, etc. In planning your fifteen minute lesson, you may find that you do not have enough time to give a test. If this is the case, concentrate on summarizing your main points, and asking the class if they have any questions on the lesson.

3. Principles of Learning - Incorporation in Instruction

Research in the psychological and educational laboratories has yielded principles of learning which may help you in your teaching. The principles are listed below. Inclusion of all of these principles may not be appropriate to the particular lesson you have chosen for this exercise. The decision as to which principles are appropriate for your lesson are dependent on: content matter, individual differences within your sample of students, rationale for lesson plans, etc. Again, it is suggested that you use the principles as the basis of a checklist of what should and should not be included in your lesson plan.

(i) Pre-instructional preparation: An introductory statement is usually beneficial to your students. The statement may take various forms, but the objective of the statement is to focus the attention of the student on the specific content area to be elaborated in the lesson. You can accomplish this 'content orientation' by: (a) providing behavioral objectives (b) giving a brief introduction or preview of the content matter (c) introducing a novel stimulus (pictures, film strip, audiotape, etc).

(ii) Motivation: A student's performance (learning) tends to increase as his desire to learn increases. Desire to learn can be increased by (a) convincing the student of the value of the lesson, i.e. application to needs of "real world" (b) social approval or rewards i.e. praise for correct responses, encouragement, etc., (c) application of content matter to one's own experiences.

(iii) Providing a model of terminal performance: The observation and imitation of relevant, salient models facilitates learning. A sample term paper, film, demonstration can be used most effectively in addition to your live presentation.

(iv) Active responding: If possible, try to involve the students in discussion with both you and their peers.

(v) Guidance: When demonstrating a problem, or introducing new subject matter, for the first time, it will be necessary for you to break the material down into component steps.

(vi) Practice: This is important for both you and the students. Try to rehearse your lesson beforehand to make sure you are within time limits, are logically organized, etc. If your lesson involves participation by your students, make sure they have adequate time to practice a concept before moving on to another (related) one. If you incorporate practice in your lesson, try to make it similar and appropriate to the instructional objectives. For example, if you intend to use examples or analogs, make them relevant.

(vii) Knowledge of results: The students should have prompt and frequent feedback as to the success of their responses. If time permits, an explanation of why responses are incorrect is also beneficial.

(viii) Graduated sequence: Arrange subject matter in a well-organized hierarchical form. Work from the simple to the complex, the familiar to the unfamiliar.

(ix) Individual differences: Be aware of the variety of learning experiences in any classroom. Try to anticipate questions that require additional explanations, modifications.

References:

Anderson, R. C., & Faust, G. W. Educational Psychology: The Science of Instruction and Learning. Toronto: Dodd, Mead & Co., 1974.

Becker, W. C., Engelmann, S., & Thomas, D. R. Teaching: A Course in Applied Psychology. Chicago: Science Research Assoc. Inc., 1971.

Mager, R. F. Preparing instructional objectives. Palo Alto, Calif.: Fearon Publishers, 1962.

McDonald, F. J. Educational Psychology, 2nd ed. Belmont, Calif.: Wadsworth Publishing Co. Inc., 1969.

SESSION 3

Introduction:

As mentioned in the introductory session we will sometimes ask you to complete preparatory readings and/or assignments prior to a scheduled lecture or workshop. These preparatory materials will be contained in your manual. The purpose of these assignments is to orient you to a particular content area by giving you some background, or basic information. We have tried not to make the assignments too burdensome. They are in fact intended to promote interactive communication among our classroom group.

Lecture #3, as noted in your schedule, will be concerned with three topics: non-verbal communication; inter-relationships of the affective, cognitive and psychomotor domains; the function of simulations, role play and/or games in education. Your assignment prior to attending this lecture will be to read pages 3:2 to 3:6 concerning these topics.

1. Nonverbal Communication

One of the most influential forces in communication in the classroom is nonverbal behavior. What teachers and pupils may not say with words, they may express with the eyes, hands and bodies. There is more to communication than oral manipulation of symbols. All three aspects - cognitive, affective, and psychomotor elements - are involved in nonverbal communication. Often this can have a more definitive impact on the receiver than the words that are actually said. Those whose task it is to work with people need considerable training in perceiving and interpreting nonverbal communication. This is especially true within our school system!

There is a field of research which investigates the various aspects of nonverbal communication. Research workers within this field conclude that nonverbal behaviors play an important role in the emotional impact of any message. Nonverbal elements of voice inflection and verbal expression act to qualify verbal communication and are primarily indicators of emotion. That is, how something is said can be just as important as what is said in terms of the impact it has on the listener.

All teachers communicate nonverbally. Most of them however, are not aware of the ways in which they transmit and receive nonverbal messages within the classroom environment. Nonverbal teaching behaviors, for example, include use of body language, consisting of facial expression, gesture and control maneuvers; and certain classroom elements, such as use of space, time, and teacher "travel".

Nonverbal behaviors provide cues and convey meaning even more readily and possibly more profoundly than speech. They suggest to pupils teacher attitudes, and are important in creating the classroom learning climate. If you as a teacher are to gain control of these nonverbal classroom phenomena you must become conscious of them, study their significance, determine their relationship to your own views about teaching and learning, and begin to regulate them.

Misunderstanding often occurs in the classroom because teachers cannot interpret verbal and nonverbal cues emitted by pupils. The converse is also true. You will encounter the pupil who appears to be listening to you, but who signals with his eyes that he is totally bored. You may also be deluded into believing that lack of movement and silence in the classroom means that children are listening carefully!

To maintain optimum communication, it is necessary that you have the knowledge and skills to get beyond words and into the affective or emotional state of the pupils in the classroom. On some levels, this is not so important. In a lecture, for example, the opportunity for a dyadic personal relationship

is not as necessary, or as available, as in a small group interactive discussion. Nonetheless, there are verbal and nonverbal behaviors that can facilitate empathic communication in even the most restricted of situations. We will be discussing this subject more fully in our first formal lecture, and in the workshops which follow. If you are interested in pursuing the matter further, several references are contained on page 3:5.

2. Affective, Cognitive and Psychomotor Domains - Inter-relationships

There are at least three components in learning: cognitive, affective, and psychomotor. The cognitive and psychomotor domains are traditionally stressed in teacher training. The affective domain has been seriously neglected. This does not mean that educators are unaware of the importance of behaviors that comprise this domain (attitudes, opinions, values, interests, feelings, etc.). Rather, the problem seems to be one of measurement.

In attempting to specify and measure instructional and/or educational objectives, it is desirable to determine the classes of behaviors reflected in the objectives. An attempt has been made to classify objectives within each of the three behavioral domains, and according to a progressive hierarchy of levels of development. Bloom, Engelhart, Furst, Hill and Krathwohl (1956) and Krathwohl, Bloom and Masia (1964) have carried out a systematic survey of educational objectives in the cognitive and affective domains and have prepared taxonomies for these two areas of behavior. The taxonomies provide a framework for specifying specific objectives as well as an alternative to the common abstract statements concerning instructional goals. An "official" taxonomy of the psychomotor domain has not yet been published. Simpson (1966) has defined the psychomotor domain as the skill domain involving movement. She has identified the stages to which a teacher must attend if he is to achieve an objective appropriate to the learner. Kibler, Barker, and Miles (1970) have also attempted to formulate a set of subclasses in the psychomotor domain.

One of the major drawbacks to the taxonomy of behaviors is the difficulty in relegating a given objective to a specific or single domain. Educators accept the fact that affective, cognitive and psychomotor skills are highly interrelated in many areas. Pragmatics however dictate that one of the areas must be emphasized to the near exclusion of others in order to develop and measure the achievement of skills objectively. Nonetheless it is of considerable advantage to those teachers concerned with the overall effectiveness of their performance to be cognizant of the complexity of classroom behavior at any

point in time. For example, in any cognitive task there will be occasions when affective and/or psychomotor behaviors predominate. By the same token, there is usually a cognitive element in any affective response.

One of the foremost aims of this course is to demonstrate the intricacies and complexities of the classroom environment, and to equip you with those affective skills which, if used appropriately, can facilitate learning. Stated another way, if you are using affective skills appropriately, then you are communicating empathically. Empathic communication applies equally well to all domains of instruction, whether it be a demonstration of a folk dance or an open discussion on the genocide issue or a lecture on the role of the church in Elizabethan times!

Appendix II contains a condensed version of the Cognitive and Affective Domains. Perusal of these condensations will illustrate the overlap between domains. For details on rationale, development, and research please refer to Bloom et al (1956) and Krathwohl et al (1964). See page 3:5 for references.

3. Simulation, Role Play, and Games

The use of games in education serves two major functions: (1) as a research tool for the study of the process simulated (in particular as heuristics in theory building); (2) as a teaching device. We are interested in the latter function. That is, we will be using simulations, games and role play both to teach and to learn.

Games are particularly suited to teach strategies and understanding of structure. A game highlights the relationships between roles. Whatever the content of the game, some features involving interaction of the participants are present and can aid in the development of interpersonal skills.

A social simulation game always consists of a player or players acting in a social environment. Each player in a game acts as a portion of the social environment of each other player. The rules of the game specify the obligations of each role: the players, each acting within the rules governing his role, interact with one another. Most social games contain contingent responses: i.e. a series of decision-making responses is evaluated as being either successful or not. Players may accumulate scores, or achieve some other type of goal.

Although simulation techniques have been used in the fields of business, commerce, defence, and leisure, the design of simulation games for classroom use is essentially a phen-

omenon of the 1960's. It was in fact the social scientists who first discovered gaming as a technique for the classroom. Several games were developed and field tested during the first half of the 1960's. Much enthusiasm was generated during this developmental stage. Little experimental research was conducted, and the evidence for facilitative use in education was inconclusive. During the latter part of the sixties, more sophisticated methodology and experience yielded favourable trends regarding such issues as: the functions of simulation, the evaluation of learning, and the mechanisms and conditions of learning. Evidence now indicates (1) that role play, simulation and games can generate great interest and involvement; (2) games in themselves teach; and (3) the players learn from their participation. The literature also indicates that learning of various kinds (strategies, attitude changes etc.) can be facilitated through simulations.

The use of simulations in education has been most obvious (in conjunction with programmed learning and instruction) as a method of teaching curriculum (i.e. mathematics, social studies, history) and in the investigation of the socialization aspects of education.

We are interested in the use of simulations and role-playing as efficient techniques in teaching those classroom skills which will help you to become a more effective teacher! The roles we are concerned with are those of the student and the teacher. The topics of the simulated events will encompass a wide range of classroom situations. We will attempt to provide you with an awareness and a chance to experience the many different affective and cognitive behaviors involved in the complex act of teaching.

If you are interested in pursuing the issue through the literature, a selected list of references is contained below.

Selected References - Session #3

1. Nonverbal Communication:

Ekman, P. Body position, facial expression, and verbal behavior during interviews. Journal of Abnormal Social Psychology, 1964, 68, 295-301.

Mehrabian, A. The effect of context on judgment of speaker's attitude. Journal of Personality, 1968, 36, 21-32.

Mehrabian, A., & Ferris S. R. Inference of attitudes from nonverbal behavior in two channels. Journal of Consulting Psychology, 1967, 31, 248, 252.

Speer D. C. (Ed). Nonverbal Communication, Sage Contemporary Social Science Issues #10, 1972.

2. Affective, Cognitive and Psychomotor Domains: Interrelationships

Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. Taxonomy of educational objectives: Handbook I: Cognitive Domain. London, England: Longmans, Green & Co. Ltd., 1956

Kibler, R. J., Barker, L. L., & Miles, D. T. Behavioral Objectives and Instruction. Boston, Conn: Allyn & Bacon, Inc., 1970.

Krathwohl, D. R., Bloom, B. S., Masia, B. B. Taxonomy of Educational Objectives: Handbook II: Affective Domain. New York: David McKay Co. Inc., 1964.

Simpson, E. J. The classification of educational objectives: psychomotor domain. Illinois Teacher of Home Economics, 10, 4, 1966, 110-144.

3. Simulation, Role Play, and Games

Boocock, S. S., & Schild E. O. (Eds). Simulation games in learning. Beverly Hills, California: Sage Publications Inc., 1968.

Cherryholmes, C. H. Some current research on effectiveness of educational simulations: Implications for alternative strategies. American Behavioral Scientist, 1966, 10(2), 4-7.

Goodman, F. L. Gaming and Simulation. In R. M. W. Travers (Ed), Second Handbook of Research on Teaching. Chicago, Ill.: Rand, McNally & Co., 1973.

McLeish, J. Systems, models, simulations and games in education: a description and bibliography. Cambridge Institute of Education, Monograph Series, No. 2, 1970, 9-16.

SESSION 4

Introduction:

The following preparatory materials (pp 4:2 to 4:17) should be read prior to Session 4. The materials are divided into three sections:

- (1) Social Interaction in the Classroom -
Observation systems
- (2) A selected review of research
- (3) Functions of observers in the Microtraining
Workshops

1. Social Interaction in the Classroom - Observation Systems

The classroom operates as a dynamic, interactive social system. The environment of the classroom, to be maximally effective, should include those elements which facilitate learning. If we define learning as a change in behavior resulting from interaction with stimuli in the environment, it then follows that observation of such behaviors will indicate (a) the variables affecting learning (b) whether or not learning has occurred.

There are a variety of classroom observational tools. These include: participation charts, checklists, rating scales, questionnaires, content analysis, interaction analysis. The advantage of using such tools in our interpretation of social interaction lies in the nature of the data collected. The data are measurable, quantifiable, and objective; and as such can be compared, plotted, and transformed to statistical symbols. Ideally, the data represent the ongoing interaction in the classroom and are relatively free from subjectivity.

When we speak of social interaction research in the classroom we are referring to the application of social-psychological approaches to education which have increased the understanding, control and prediction of relevant variables influencing education settings. Without this social-psychological frame of reference, educational theory and research often lacks relevance.

Social interaction can be defined as activities which involve at least two persons such that the behavior of one is a stimulus and/or a reinforcer for the behavior of the other. That is, social interaction is a process of reciprocal modification of behaviors by individuals responding (reinforcing) each to the other in social settings. The significance of social interaction in an educational situation is that it is a major common element in all educational activities.

Research in social interaction in the classroom has been influenced through developments in various related areas. These include research on the following: teacher qualities or traits, child development, sociometric relationships, socio-psychological phenomena.

Research on teacher qualities or traits came initially from within the field of education. This research was based on the assumption of a "straightforward" cause and effect relationship between the conditions or ingredients present in any learning situation and the quality of learning produced in that situation. That is, the classroom teacher is viewed as providing one of the conditions of learning. The

assumption of the researcher is that an optimal combination of personality traits, attitudes, and background characteristics will enable the teacher to provide an optimal learning environment for the students. This research problem emerged only in the early 1920's: it has become a major centre of interest in contemporary educational research.

Child development studies look at the qualities brought to the situation by the learner. The assumption is that since children differ in the skills they bring to the learning situation, the most effective learning will take place when the material to be learned is most adapted to whatever skills the child is able to apply to the learning environment. Child development research focussing on education has exerted considerable influence since the early 1930's.

Sociometry can be defined as the measurement of relationships within groups. The application of this technique within the school system became prevalent in the 1940's. Typical research would involve the identification of preferences, attributes, interests in both pupil and teacher contexts (i.e. preference for classmate, best friend, best-liked teacher, etc.) Correlations were made between teacher and student ratings. Having organized the class according to those expressed preferences, the research worker would observe the incidence of different classroom behaviors within defined categories. Social-psychological research focussed on the relationship between social interaction and different learning environments (e.g. the relationship between problem-solving and authority, power, personal prestige).

Assessment of social interaction has moved from the rating and opinionnaire stage through the observation and analysis of perceptions by pupils and teachers of their interpersonal relationships, to analyses of some of the specific variables in the socio-psychological context of the instructional process.

2. A Selected Historical Review

Some of the most important research into the nature of the classroom group took place during the formative decades 1940-1960. This period was influenced by earlier studies of group life by sociologists. Lippitt (1940) for example, showed that the leadership qualities and personality of a teacher have a controlling effect on the behavior patterns of the students. Anderson and Brewer (1945) worked from the postulate that the main direction of influence in the classroom is from teacher to pupil. Withall (1949) treated social-emotional climate as a group phenomenon determined primarily by the teacher's verbal behaviors. Jennings (1947) conceptualized group life and interaction as fulfilling two major groups of individual needs (i) the friendship, or psyche needs and (ii)

the task, work or socio-needs. Flanders (1949) investigated the relationship between learning and achievement, and the nature of teacher-pupil interaction. Bales (1950) was interested in the analysis of small group problem-solving behavior. Other important research was conducted by: Perkins (1949), Glidewell (1951), Singletary (1951), Thelen (1959), Cunningham (1951), Jenkins (1951), Medley and Mitzel (1955), Hughes (1969), and Trow (1960). The influence of these researchers, representative of the changing methodologies existing during the period 1940-1960, moved classroom learning studies away from single-criterion to complicated patterns of interaction.

From the early 1960's up to the present time, descriptive systematic category systems (particularly classroom interaction analysis) have been used in a variety of ways. They have been used: (i) to collect specific, relatively objective data of teacher and pupil behaviors as observed in the classroom; (ii) to determine teacher effectiveness by relating specific teaching behaviors to specific pupil outcomes, and (iii) to determine the effects of training teachers in the use of these techniques.

Most of the systems emerging since 1960 are modifications or extensions of earlier classical work in the field. Data collection is done via video and audio tapes, as well as by transcripts, and ongoing direct observations. The acceptance of classroom observation systems as a tool for researchers in the evaluation of teaching effectiveness is evident from the proliferation of published studies in that area. The incorporation of observation systems into programs for the preparation of school personnel has developed much more slowly.

There is no one universally accepted observational system which measures all facets of behavior and interaction in the classroom. This derives from the fact that numerous ideas and definitions abound concerning effective teaching. Effective teaching can be, for example, described within the context of affective, cognitive, or multidimensional systems. The various observational systems allow the researcher or user to define by objective measures whatever facet of effective teaching is of interest.

Some of the more important research from the early 1960's to the present time includes: Spaulding (1963), Amidon and Hunter (1966), Taba, Levine and Elzey (1964), Perkins (1965), Jackson (1965), Warmon and Hermanonowicz (1965), Bellack (1965), Smith and Meux (1959), Spaulding (1967), Honigman (1967), Ober, Bentley and Miller (1971), McLeish and Martin (1975). Ongoing research has also resulted in revision and modification of earlier workers, e.g. Flanders (1970), Bales (1970).

There have been several comprehensive reviews of the role

of direct observation in teaching, the nature of an observation technique, historical reviews, criticisms, etc. The interested reader is advised to refer to the selected reference list on page 4:8. We are also enclosing the latest revisions of the Bales (1970) and Flanders (1970) interaction analysis category systems. Your review of the literature will indicate that both of these research workers have greatly influenced the field. Many of the observation systems you will come into contact with are based on the Bales and/or Flanders models. The Bales (1970) category system is of special interest in this course, as we will be using a modification of this observation technique in our demonstrations and workshops.

Flanders' Interaction Analysis System (1970)*

Teacher Talk	Response	1. ACCEPTS FEELING. Accepts and clarifies an attitude or the feeling tone of a pupil in a nonthreatening manner. Feelings may be positive or negative. Predicting and recalling feelings are included.
		2. PRAISES OR ENCOURAGES. Praises or encourages pupil action or behavior. Jokes that release tension, but not at the expense of another individual: nodding head, or saying "Um hm?" or "Go on" are included.
		3. ACCEPTS OR USES IDEAS OF PUPILS. Clarifying, building or developing ideas suggested by a pupil. Teacher extensions or pupil ideas are included.
		4. ASKS QUESTIONS. Asking a question about content or procedure, based on teacher ideas, with the intent that a pupil will answer.
		5. LECTURING. Giving facts or opinions about content or procedures: expressing his own ideas, giving his own explanation, or citing an authority other than a pupil

* Flanders, N. A. Analyzing teaching behavior. Don Mills, Ont.: Addison-Wesley, 1970.

Flanders' Interaction Analysis System continued.

Teacher Talk	Initiation	6. GIVING DIRECTIONS. Directions or commands to which a pupils is expected to comply.
		7. CRITICIZING OR JUSTIFYING AUTHORITY. Statements intended to change pupil behavior from nonacceptable to acceptable: bawling someone out: stating why the teacher is doing what he is doing: extreme self-reference.
Pupil Talk	Response	8. PUPIL TALK--RESPONSE. Teacher initiates the contact or solicits pupil statement or structures the situation. Freedom to express own ideas is limited.
	Initiation	9. PUPIL TALK--INITIATION. Expressing own ideas: initiating a new topic: freedom to develop opinions and a line of thought, going beyond the existing structure.
		10. SILENCE OR CONFUSION. Pauses, short periods of silence or of confusion in which communication cannot be understood by the observer.

Bales' Interaction Process Analysis System (1970)*

SOCIAL-EMOTIONAL AREA

A. Positive
(and Mixed)
Actions

1. Seems friendly

2. Dramatizes

3. Agrees

TASK AREA

B. Attempted
Answers

4. Gives suggestion

5. Gives opinion

6. Gives information

TASK AREA

C. Questions

7. Asks for information

8. Asks for opinion

9. Asks for suggestion

SOCIAL-EMOTIONAL AREA

D. Negative
(and Mixed)
Actions

10. Disagrees

11. Shows tension

12. Seems unfriendly

Recip-
rocal or
Opposite
Pairs

- Key:
- a. problems of information
 - b. problems of evaluation
 - c. problems of control
 - d. problems of decision
 - e. problems of tension-management
 - f. problems of integration

Summary of Priority Rules for Scoring

The following rules are to be used in cases of conflict as to where an act should be scored. With only minor exceptions, a given act is to be placed in one and only one category.

1. Give priority to a scoring in category 2, Dramatizes, or category 11, Shows Tension, over scoring in any other category. This rule is particularly relevant to acts that would otherwise be placed in category 6, Gives Information. Whenever the action of a person or imaginary being is reported, even though the group member reporting it may feel he is giving information, the interaction observer should place the act in category 2.
2. Give priority to a scoring in category 1, Seems Friendly, or in category 12, Seems Unfriendly, if an element of

* Bales, R. F. Personality and interpersonal behavior. Holt Rinehart, and Winston, New York, 1970.

interpersonal feeling is present. This rule is particularly relevant to acts that would otherwise be categorized as giving opinion and giving suggestion. Simple acts of agreement and disagreement are exempt.

3. Give priority to a scoring in category 4, Gives Suggestion, or Category 9, Asks for Suggestion, over a scoring in category 5, Gives Opinion. Do not score an act in category 5, Gives Opinion if you can reasonably score it in any other category.
4. After an initial act of disagreement, or of agreement, the scoring reverts to the neutral categories based upon the interaction form of the act. This rule prevents categories 10 and 3 from being used as a "sink".

Selected References - Observation in the classroom

- Bales, R. F. Interaction process analysis. In D. L. Sills (Ed.), New international encyclopedia of the Social Sciences. New York: Macmillan, 1968.
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- Rosenshine, B., & Furst, N. The use of direct observation to study teaching. In Second Handbook of Research on Teaching. (Ed. R. M. W. Travers), Chicago: Rand McNally, 1973.
- Yee, A. H. Social interaction in educational settings. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971.
(in particular, Withall/Lewis pp 25-44; Kliebard, pp 373-393; Gage, pp 355-365; Flanders, pp 394-406).

3. Function of Observers in Microtraining Workshops

During the introductory lecture, we mentioned that your participation in the *microtraining workshops would be either

Note: * The whole concept of microtraining will be discussed in detail in Session 5. The above terms will become more meaningful at that point!

as a "participant" or as an "observer". Your function as an observer will be to work with a number of other observers in the recording of ongoing behaviors of a small group of participants. Research has shown that observation of behaviors is an effective way of learning those behaviors. You will notice from your schedule that all members of the class receive all of the informative materials (manual, lectures, etc). The only difference between an observer and a participant is the role or type of activity taken during the workshop.

During each workshop, you will observe and record the activities of each member of the participant group. You will record two five-minute microlessons from each member. The first microlesson differs from the second microlesson in the fact that feedback (videotape, group assessment, etc) is provided to the participant on his/her performance in the first microlesson. That is, the second microlesson should benefit from such feedback.

Observation Sheets: We will be using three types of observation sheets in the microcounseling sessions. Some members of the observer group will be responsible for completing the Response Count Observation Sheet; others will be responsible for the Ratings Observation Sheet; and still others will be responsible for a simplified version of an Interaction Coding technique.

It is important that you identify each observation sheet which you complete. There are a series of blanks on the top of each sheet which will help you in your task. Typical data will be: name of the observer, name of the person observed, ordinal number of observation (whether it is the first, second, etc. observation). You may also want to record other details such as the lesson topic, problem area, seating arrangements of the group, etc. One of the important reasons for placing identifying observations on your sheet is to ensure that the information sheet can be reliably attached to the person observed.

Let us examine the three observation sheets we will be using in our role as observer.

(1) Response Count Observation Sheet: Try to keep as accurate a record as possible of the number of times a target behavior occurs, and whether or not it was appropriately used in the social environment. The target behaviors will be identified for you, so you do not have to categorize them yourself. Simply record the occurrence of behaviors which fit into categories included under a particular skill cluster. There will of course be behaviors which do not fit into any of the categories, and in such cases we simply do not record these responses. There will also be cases in which some of

the target categories are not used at all. In addition to recording responses, you may wish to make some short general comments after the 5 minute observation period is completed.

(2) Ratings Observation Sheet: Your task will be to rate the participant on all of the target behaviors, which will be listed on the observation sheet. You will be using a five-point scale, ranging from 1 to 5. The intervals on the scale represent a judgment of the particular behavior you are rating. For example one of the skills you will be learning relates to open-ended questions. If you were judging a person on his facilitative use (i.e. appropriate use) of these open-ended questions, and if you felt he used this particular skill in a way that consistently resulted in interactive communication, you would probably rate him at either a 4 or 5 on the 5-point scale. Descriptions of the degree of facilitation accorded each number on the scale are listed below:

1	2	3	4	5
well below average (non-facili- tative)	below average	average	above average	well above average (highly- facilitative)

In addition to your rating task, you may find it helpful to record general comments regarding any of the individual behaviors, or on the general effectiveness of the performance. Please make these comments in the space available on the sheet.

(3) Interaction Codings: Your task is to use a simplified Bales coding system to record the ongoing interaction you are observing. The categories, and rules for using the categories are listed on page 4-6. The categories are again listed below:

- | | |
|----------------------|---------------------|
| 1. Seems friendly | 7. Asks information |
| 2. Jokes, fantasy | 8. Asks opinion |
| 3. Agrees | 9. Asks suggestion |
| 4. Gives suggestion | 10. Disagrees |
| 5. Gives opinion | 11. Laughs, tension |
| 6. Gives information | 12. Seems negative |

We will be explaining this system in more detail in class, but in general the procedure is as follows: Simply record each "act" that occurs, and who performed the act. For simplicity you should number the helper (student teacher) as "1" and the helpee (pupil) as "2". If you are observing a group situation rather than a dyadic situation, simply number the helper "1" and the group "3". That is, we are more concerned with the

behaviors of the helper than of the individual members of the group in the workshops (we are interested in assessing the performance of the helper in an objective way). Now that we know what numbers are to be assigned to what people, let us take a closer look at the Interaction Coding Sheet (page 4:16).

The left-hand side of the sheet lists the twelve Bales categories. The tally marks are to be placed in groups of five (~~||||~~) to the right of the categories. One half of the matrix will be filled with responses or acts initiated or received by the helper or teacher; and the other half will be filled with responses or acts initiated or given by the class or helpees.

The definition of an "act" is arbitrary. As a general rule of thumb it consists of a sentence, or a gesture, which is independent of the "act" preceeding or following the response being recorded. We will discuss this in more detail in class. Do not be concerned if you fail to record a behavioral act. The skill of coding takes many hours of practice!

On the back of the interaction coding sheet is a summary statement framework. Once you have completed your coding of a segment of behavior, your first task will be to total each category for both the helper and the helpee. Transfer these totals to the summary sheet. Your next step will be to total the number of acts for the helper, and for the helpee (add together the figures in the twelve categories). If you have access to a calculator, or if you feel ambitious, your next step will be to fill in the percentage of acts in each category for both the helper and the helpee.

You will find this information helpful in giving feedback to the person you are observing. If you are observing the person a second time, you will have an index of how much he has improved in each category.

Observer Conference: At the close of an observation period, you and the other members of the observer group should discuss your findings as recorded on your data sheets. As a result of this discussion, you will get feedback on the accuracy of your judgments as seen through the judgments of your peer observers. If time permits, you may wish to write down three or four summary statements on the observation for later use by the helper. Don't forget that you will be making two separate sets of observations for each teacher or helper, in accordance with the microtraining model we are using. Your second observation sheet could therefore contain objective comments on the change in performance between observation #1 and #2.

Please make sure that you hand in your observation sheets at the completion of each workshop session in which you are involved. Not only will the participants be anxious to see your recordings, but your instructors would also like to see if you had any particular difficulties with the coding system.

Samples of the three observation sheets are contained on pages 4:13 to 4:17. Please read the preparatory materials for Session 4, prior to the session, so that you will be able to ask meaningful questions!

As we proceed through the microcounselling sessions, we will be trying to apply clusters of skills. The observation sheets will be matched to the clusters of skills being focussed on in the Workshop. The samples above, for example, are for use in Workshop #1 - Basic Helping Skills. The modified Bales system will be used for all workshops.

When we proceed through the microteaching workshops, we will be using another type of evaluation rating sheet, designed specifically for observation of the teaching act.

RATINGS OBSERVATION SHEET

Name of observed: _____ Name of observer: _____

Observation #: ☐ 1st ☐ 2nd Date: _____

Skill Cluster #1 - Basic Helping Skills

Instructions: Circle the number that best indicates your judgment of the appropriate use of the skills listed below: (i.e. how well the person you observed used the individual skills). The degree of appropriateness accorded each number on the five-point scale is listed below. Please note that there is also space for overall comments, and a rating of the overall performance.

Eye contact 1 2 3 4 5

Posture or body position
(including gestures) 1 2 3 4 5

Facial expression 1 2 3 4 5

Verbal message (quality,
intonation, pitch, level,
pacing) 1 2 3 4 5

Verbal continuity (smooth
flowing, no unnecessary
topic changes, long
silences, etc) 1 2 3 4 5

Open-ended questions 1 2 3 4 5

Encouraging cues (short,
nondirective invitations
to continue talking) 1 2 3 4 5

Overall Performance 1 2 3 4 5

General comments on performance:
Praise, criticism, suggestions?

(use back of sheet if necessary)

RATINGS OBSERVATION SHEET CONTD

General Comments on performance:

(praise or criticism of one or more skills; total performance; suggestions for improvement?)

Rating of Overall Performance:
(in terms of appropriateness)
i.e. effectiveness

1 — 2 — 3 — 4 — 5

Key to rating scale:

- 1 - well-below average (inappropriate use of skill(s) ineffective performance
- 2 - below average
- 3 - average
- 4 - above average
- 5 - well above average (highly appropriate use of skill(s) effective performance

BALES INTERACTION CODING SHEET CONTD

NAME _____

HELPEE OR TEACHER _____

ACTIVITY _____
(Skill cluster #)

OBSERVATION #
1st 2nd

DATE _____

SUMMARY STATEMENT

The raw data from your observation sheet should be transferred to this summary statement.
Enter the number of times each unit of behavior occurred in each category, and according to initiator of the response (helper/helpee).

<u>Code</u>	<u>Initiator of Response</u>					
	<u>1. Helper</u>		<u>2. Helpee</u>		<u>3. Group</u>	
	<u>Sub-</u> <u>Totals</u>	<u>%</u>	<u>Sub-</u> <u>Totals</u>	<u>%</u>	<u>Sub-</u> <u>Totals</u>	<u>%</u>
1. Seems friendly						
2. Jokes, fantasy						
3. Agrees						
4. Gives suggestion						
5. Gives opinion						
6. Gives information						
7. Asks information						
8. Asks opinion						
9. Asks suggestion						
10. Disagrees						
11. Laughs, tension						
12. Seems negative						
	TOTAL _____		TOTAL _____		TOTAL _____	
	(Helper)		(Helpee)			

General Comments:

SESSION 5 - MICROTRAINING

Introduction:

Preparatory materials for Session 5 include pages 5:2 to 5:8. These materials outline the definition and functions of microtraining. The microteaching paradigm is given as an example of the operational format. Also outlined will be the application of microtraining to our workshops on affective communication skills in the classroom. You will also be introduced to the role of the participant in these workshops. This will complement the materials in Session 4 concerning the role of the observer!

1. Microtraining

Microtraining is a systematic behavioral approach to skills acquisition. The term "microtraining" appeared in psychoeducational literature in the late 1960's as a comprehensive paradigm which would subsume the already-established microteaching technique (1963), and the developing micro-counselling concept (1966), and which could be extended not only to other innovative and exploratory adaptations in the helping and educational professions, but also to business, community, and industrial concerns.

Briefly, microtraining is a skill training situation with both teaching and learning components. It is scaled down in terms of time and complexity of desired target behavior. Microtraining may take place in either a dyadic or small group setting. The content of the interaction period from which performance assessment is taken may be either simulation, role play, or a real-life event. Of interest are the skill acquisition behaviors of the trainee, and the interaction between teacher and learner, and/or among group members (if the training situation is non-dyadic).

The principal aim of microtraining is to provide experiences which serve as a bridge between classroom or textbook theory and actual practice. The structure of microtraining provides a framework for the acquisition of a behavioral repertoire of precisely-defined skills within a given disciplinary or professional area. Microtraining shortens the instructional and interactional period, and provides for intensive practice until a skill is learned thoroughly. The concept of the "single skill" is a vital part of the procedure. Video or other types of recordings are played back to provide important supports for the learning and retention, the transfer and generalization of skills to more complex, "real-life" situations. Thus, on-the-job tests would reveal the effectiveness or otherwise of the particular microtraining procedures.

The essence of microtraining is the systematic break-down of a desired target behavior into manageable components, and providing the trainee with effective instruction involving the opportunity to practice and acquire each component with interspersed critical comment by others. The final task of the trainee is to integrate each of the components into the projected behavior. Microtraining can be terminated when the trainee demonstrates a specified level of competence in the target behaviors.

Training procedures normally involve cue discrimination as well as specific suggestions for improvement using video and/or audio recordings, written materials and supervisors' comments based on an actual re-play of the performance.

Microtraining can be conceptualized as a cybernetic system, with recursive loops which ensure that certain defined performance criteria are reached in all component parts of the system. The full complement of the microtraining model ("feedback", "modeling", supervision with cuing and discrimination) is generally thought to be the most effective way to exemplify and to develop the specified skills. If the behavior is simple, the basic framework may be shortened. With more complex skills, the importance of extended training becomes manifest. It is also true that some individuals require only certain parts or elements of the training program, while others learn best from the full treatment module. The appeal of the microtraining paradigm lies in its flexibility--it can be modified and extended in innovative ways: it can be designed to be as comprehensive and sensitive a training method as the complex and differential behaviors and the individuals involved in the training program.

2. Microteaching

There are a number of techniques which use the micro-training format. Microteaching is one of them. In our workshops we will also be using microcounselling, and micro-observation. It will probably be helpful to you if we outline the microteaching paradigm. Microcounselling and micro-observation training schemes would follow the same pattern.

The microteaching paradigm:

1. The trainee studies a specific teaching skill. This orientation prepares the student for application of the skill. Training in this preliminary step may include any or all of the following: (i) written materials describing the rationale involved in the isolation of a specific skill, (ii) documented evidence of the effectiveness of this method of skill acquisition (iii) written or video- or audio-recordings of examples and non-examples of the skill, (iv) opportunity for cue discrimination (self-tests, identification, etc).
2. The trainee attempts to use the skill in a five to ten minute lesson to a group of not more than seven pupils. This microlesson is recorded on videotape or on audiotape.
3. The trainee receives "feedback" about the quality of his performance. This feedback takes place, if possible, immediately after the microlesson, when both the trainee and a supervisor review the film together. The training materials may be explicit enough so that self-assessment can take place in lieu of, or in addition to, supervisor input. Written evaluation from the students to whom the lesson was presented is usually taken.

4. The trainee utilizes information from the feedback session to improve his lesson plan. He then teaches the same lesson to the same, or to a new group of pupils. This lesson is also taped.

5. "Feedback" from the supervisor and/or students in the class is then given the trainee in a review of this second attempt to exhibit the teaching skill in question. If the criterion of performance is not met, the cycle is repeated.

Microteaching programs may deviate from the above model, depending on variables such as: the specific needs of the students, the constraints of the individual institution, the demographic composition of the student population, the content or subject area, as well as the difficulty of the skills being acquired. Other variable elements of the model are: lesson length, number of times the lesson is taught, the amount and the kind of supervision and feedback, the use of videotape or audiotape recordings.

3. Microtraining Workshops

Purpose: The purpose of the Workshops is to give you the opportunity to put into practice the theoretical concepts introduced to you during the course of the term.

As a result of your coursework to date, you should be aware of the complexities of human communication patterns, and of the importance of understanding not only the content message of another person but also the affective or "feeling" component of the message. If you can understand the duality of any communication, and can successfully relay your understanding back to the person(s) communicating to you, you have set the conditions for a meaningful and beneficial interaction.

Overall Aim: The overall aim of the Workshops is to present you with a series of affective communication skills (helping skills) which will facilitate your interactive communication with another person, with a small group of people (4-5), or with a larger group (classroom-size). We feel that knowledge and awareness of these facilitative techniques, combined with the ability to identify, discriminate and apply the skills at the appropriate point in your interpersonal communications, will be useful to you in your classroom interaction. Not only will you be able to understand others more accurately, but you will also be able to provide guidance in the identification of problems, and to suggest alternative points of view and action to alleviate or "solve" the problem.

Although this course is primarily concerned with the application of affective skills to the classroom environment, you will also find these skills useful in any type of social interaction, and in any environment!

Readings: You should now be familiar with the book "The Helping Relationship", by L. M. Brammer. Chapter 6 in this book is especially relevant to the overall concept of the Microtraining Workshops, and you are advised to read this chapter prior to the first Workshop. The book review of Brammer, handed out to you in the introductory session, is also helpful.

The Workshops: Microtraining will involve three micro-counselling workshops, and three microteaching workshops.

1. Microcounselling. The first three microcounselling workshops are concerned with affective skills which will be helpful to you in the classroom situation. These skills will be demonstrated in a dyadic situation (two person groups). The content of the simulated events (role-play) will be primarily affective.

Workshop #1 will concentrate on the basic helping skills (attending skills, open-ended questions, minimal facilitating cues, verbal expression). Workshop #2 will concentrate on Selective Listening skills (reflection of feeling, reflection of content, paraphrasing, summarization of feeling). Workshop #3 will focus on two sets of communication skills relating to problems arising in the classroom environment (i) facilitative skills which encourage open expression and the sharing of personal experiences and points of view, and (ii) integrative skills which allow for a final statement and resolution of the problem.

2. Microteaching. Workshops # 4, 5, and 6 will assume a microteaching framework. The workshop experience in the appropriate use of affective skills will thus far have been in the context of simulated affective events. The purpose of the last three workshops will be to demonstrate competency in the appropriate use of affective communication skills in a variety of cognitively-oriented (i.e. teaching-learning) classroom situations. Workshops #4, 5, and 6 will thus concentrate on the application of the affective skills to cognitive events in the classroom. That is, we believe that a lecture, lecture plus discussion, and a seminar although primarily cognitive in nature, all have affective components. You are all familiar with the cognitive components of classroom events (lesson plan, instructional procedures, evaluation, etc.). We will be attempting to relate appropriate affective skills to these types of events.

Manual - Format for Workshops: The skills covered in each of the workshops are outlined in your manual. You will note that for each Workshop section, each skill is defined. The functions of the skill, and examples of appropriate and inappropriate uses of the skill are also given. Short self-

tests or assignments are also included where necessary. Please read the assigned sections of the manual carefully, and bring them with you to the Workshops. You will no doubt want to refer to the manual during the Workshop activities.

Participation: To receive maximum benefit from the Workshops, we would like you to participate very actively. As mentioned in Sessions #4 and #5, there will be two major ways in which you can participate in the activities of the Workshops. You can be a "participant" or an "observer". Either role will facilitate your learning of the clusters of affective skills. That is, your experience in either role should lead to the inclusion of affective skills in your classroom behavioral repertoire.

As a participant, you will attempt to apply selected skills in either a dyadic or small group setting, using role play techniques. This will be accomplished using the micro-training format described early in today's session. A detailed description of your duties as a participant is found on pages 5:6 and 5:7.

As an observer, you will be asked to observe and record the interaction of the participant group. As noted in Session #4 you will be working as part of an inter-acting group of observers. Your function will be to record the appropriate and inappropriate uses of the particular skills being practiced.

Ideally, you should be given an opportunity to experience both roles of Participant and Observer for all sets of skills in the microcounselling and microteaching workshops. However, time may not permit this to take place. Your instructors may therefore choose to let you experience an equal number of experiences as Participant and Observer, half in the micro-counselling situation, and half in the microteaching situation.

4. Role of the Participant

Your role as a participant in the workshops is to attempt to apply selected skills in either a dyadic (two person) or small group setting, using role play techniques. This will be accomplished using the microtraining format, which was described on pages 5:2 to 5:3.

You are requested to study the preparatory materials for each cluster of skills prior to the actual workshop. Your instructors will guide you through the workshop. That is, they will provide you with ideas for the role-play, give you criticisms and feedback, etc.

Timing: Unfortunately we must place strict timing regulations on your participation as both "teacher" and "student".

Your participation as a "teacher" or "helper" will therefore take the following form:

(1) You will interact with another person, or a small group, and will try to use the skills which have been designated for that particular workshop. The content of your interaction (role-play) will be decided during the course of the workshop if possible. During the last three workshops, however, you will probably be asked to prepare a short lesson beforehand.

(2) Time of interaction and application of skills will be five minutes.

(3) At the end of five minutes you will view a videotape of your performance. During this time you should try to assess your own performance using the Observation Rating Sheet.

(4) At the end of this five minute videotape, the members of your group (plus the instructors, and official observers) will provide you with objective feedback, suggestions for improvement, etc.

(5) You will again interact with one person, or a small group, trying to improve your performance on the specific skills designated in the workshop. As the workshops proceed, you may also receive criticism on your performance of skills presented in earlier workshops.

(6) The group of "students" (plus instructors/observers) will provide you with feedback on your latest performance.

Total time, therefore, for each "teacher" or "helper" participant will be:

Interaction #1	5 mins
Replay	5 mins
Feedback	5 mins
Interaction #2	5 mins
Feedback	<u>5 mins</u>
	25 mins

If you are a "student" in the group or a helpee in the dyad, your role will be to interact with the "teacher" or helper and/or to observe her performance closely. During the replay of interaction #1, you will be asked to complete a Rating Observation Sheet (including written short comments). You will then be in a position to provide the "teacher" or helper with objective feedback. During the second interaction period, you are also requested to complete the rating form, during the performance. THERE WILL BE NO REPLAY FOR INTERACTION #2, so try to have your assessment ready.

5. Post-Workshop Assessment

All assessment sheets will be collected at the end of each workshop. If you were the "teacher" or helper in that workshop, these assessment sheets are available for your perusal. The videotaped segments will also be available to you.

Videotaped segments are available to any member of the class. We think you will benefit from viewing these tapes, or portions of them. So if you have time, please arrange to borrow one of the tapes or cassettes.

Selected References - Microtraining

- Allen, D. W., & Ryan, K. A. Microteaching. Reading: Addison-Wesley, 1969.
- Borg, W. R. Moving towards a breakthrough in teacher education. Education, 1975, 95(4), 302-323.
- Ivey, A. E. Microcounselling and mediatherapy: state of the art. Counsellor Education and Supervision. 1974, March, 179-183.
- Jensen, R. N. Microteaching. Springfield, Ill.: C. C. Thomas, 1974.

SESSION 6

Introduction:

The preparatory materials for Session #6, are contained on pages 6:2 to 6:5. These materials will cover the first cluster of skills: Basic Helping Skills.

Session #6 is a discussion-demonstration period prior to Workshop #1. During this session, you will have an opportunity to ask your instructor for clarification or elaboration of your preparatory materials. Your instructor will demonstrate the appropriate and inappropriate use of each of the basic helping skills. You will be asked to observe the interaction, and identify examples of these skill applications. You will also be shown how to use the observation sheets relating to these skills.

If time permits, we will go through one of the micro-training sequences (25 minute block of time) so that you will be familiar with the sequencing of events in the actual Workshops. Workshop #1 will cover Sessions #7 and #8.

Your instructor will probably choose to organize the order in which various students take the role of helper and helpee. It would be helpful if such a schedule was distributed or posted beforehand. You will find that a smooth-flowing workshop is dependent on planning and cooperation amongst members.

We hope you enjoy the Workshop!

Skill Cluster # 1

BASIC HELPING SKILLS

1. Attending behaviors

An important aspect of establishing an interactive relationship with another person, or with a small group of people, is to be aware of, and responsive to the communications of an individual, and to be able to communicate this attentiveness to that person. When we are attentive to others, we are showing them by our actions that we want to know more about what they are saying and doing. We are providing the other person with the necessary reinforcement or attention to continue relating with us.

Attending behaviors can be broken down into their verbal and nonverbal components. Let us look at four of these components: (1) eye contact (2) posture, or body position (3) quality of the verbal message (4) verbal continuity (your remarks should follow on the message being communicated to you, and should not, for example, deflect the path of the conversation).

(1) Eye contact. It is possible to communicate our interest and desire to understand others by our eye contact.

Good eye contact consists of looking at an individual when he is talking to you, or when you are talking to him.

Poor eye contact consists of not looking at the other person, or staring at him without intermission, or blankly, and looking away as soon as he looks at you.

(2) Body position (posture). An effective nonverbal method of communicating our interest is through the position of our body in relation to the speaker, and also through gestures and facial expressions which accompany the body position.

Good posture includes: sitting or standing with one's body facing the speaker, or turning towards him; hands should be in a relaxed position, occasionally being used to indicate by gesture what is being communicated verbally; being responsive facially, e.g. a spontaneous smile to indicate understanding or a frown when one doesn't. The body position should facilitate relaxation of the speaker. When you, as a listener, are responding to a statement of the speaker, your posture, facial expression and gestures should be congruent with your verbal statements.

Poor posture position would include: sitting with body and head not facing the speaker; slouching; sitting in a very fixed, rigid position without moving; being restless or fidgety; being preoccupied with hands, papers on lap or desk; cleaning fingernails; inappropriate smiling, frowning or nodding of head.

(3) Quality of the verbal message. Good verbal quality is also important in communicating your interest in another person, and in getting him to talk to you. Good verbal quality includes: a pleasant, interested intonation; speech neither too loud nor too soft; reflection of the affect appropriate to the message communicated; a choice of words which facilitates the listener's understanding of your communication.

Poor verbal quality includes: a flat dull tone of voice; irrelevant and/or uninterested responses; a quivering voice; speech either too loud or soft; excessive use of jargon; excessive use of filler words such as "you know".

(4) Verbal continuity. Verbal continuity behavior represents your ability to respond to the last comment or some preceding comment of another person without introducing new inappropriate information.

Good verbal continuity would include: a minimum number of topic switches or deflections initiated by you. Poor verbal continuity would consist of your jumping from topic to topic, referring back to some minor or irrelevant and earlier statement of the speaker. As a rule-of-thumb, criterion for identifying examples of poor verbal continuity in yourself would be the realization that you are dominating the conversation! There is little evidence of interactive communication when the other person observes that you are not really interested enough to stick to the topic! Verbal and nonverbal cues reveal whether you have "lost" the other person. Be sensitive to them!

2. Open Invitation to Talk

The ability to ask open-ended questions is another skill you will find effective in getting to know and understand, and possibly help another person. Open-ended questions are those which leave a number of alternative answers open to the other person, and which increase the probability of relevant information being made available to you.

Examples of open invitations to talk would be:

(i) Could you tell me a little more about your assignment?

- (ii) How did you feel about registration week this year?
- (iii) What do you do when you feel depressed?

*Closed questions, which inhibit understanding, limit the person to a simple "Yes" or "No" answer. They do not invite one to elaborate, or to specify a particular aspect of the conversation. Examples of closed or restricting questions would be:

- (i) I understand you are doing your assignment in the child development area?
- (ii) Wasn't the registration a hassle again this year?
- (iii) Do you feel lonely when you are depressed?

Open invitations to talk are useful in initiating communication and in helping one to elaborate on a point.

3. Minimal Encouraging Cues

Once a person has started to talk on some topic that is of interest to him, you should attempt to facilitate his continuing to do so. Very little is needed to encourage the other person to continue talking, elaborating, and explaining. On the other hand, very little is needed to inhibit conversation:

Examples of minimal encouraging cues are:

- (i) "Oh?" "So?" "Then?" "And"
- (ii) The repetition of one or two key words from a previous statement.
- (iii) "Tell me more."
- (iv) "How did you feel about that?"
- (v) "Give me an example."
- (vi) Head nods.
- (vii) "Umm-hmmm"

The word "minimal" refers to the length of the statement you make, and also to the amount of direction or intervention you impose on the content and flow of the person interacting with you.

Please note that there are appropriate and inappropriate points in dyadic and group communication in the use of this technique. For example, one would not normally use as a minimal

*There are occasions when a closed question can be used most effectively, for example, in perception checking or confrontation. However this type of questioning is not a basic helping skill. It is used only when you have established interactive contact with a person.

encouraging statement "Tell me more" after a lengthy and exhaustive account by the speaker, in which he has provided you with enough relevant information for you to take a more active role in the conversation.

SESSION 7 and SESSION 8

These are the Microtraining Workshops for Skill Cluster #1, Basic Helping Skills.

SESSION 9

Introduction:

The preparatory materials for session #9 cover the second cluster of skills. These are called "Selective Listening Skills".

As with the preparatory materials for the first cluster of skills, we hope you will come to session #9 (a discussion-demonstration session) with any problems you may be having with the instructional materials! You will note that there is one short assignment (to be discussed in class), and self-test.

WORKSHOP #2 - SELECTIVE LISTENING SKILLS

This workshop will concentrate on four skills dealing with reflection and summarization of feeling, and paraphrasing and summarization of content. These skills concentrate on giving selective attention to single aspects of a person's communication.

1. Reflection of Feeling

One of the aims in your interpersonal communications should be to help another person express the central concerns that he is experiencing. This can be accomplished by listening for and responding to the feelings of the other person. You are trying to communicate to another person that you can accurately sense the world as he is feeling and perceiving it. If this feeling is successfully communicated, it may be helpful in facilitating more complete self-understanding and self-awareness on the part of the person who has turned to you as a confidant.

The skill, reflection of feeling, stresses being alert to and responding to the feelings being expressed rather than attending solely to the content of what the person says. You must listen to how the person says what he does. For example the person may speak more quickly when communicating enthusiasm, more slowly when communicating discouragement, etc. It is the "feeling" portion of the communication to which you should pay particular attention.

Being alert to and responding to the feeling being expressed is a skill which is appropriate at any time, regardless of the nature of the feeling (positive, negative, or ambivalent) and regardless of the direction of expression (towards self, others, you, the situation, etc.)

Uses of the skill: Some suggestions for using the skill of reflecting the feeling of the speaker are:

(1) Listen for the feeling which the person is trying to communicate to you, or to others. What he says is only part of the message. How he says what he says is important. A person communicates by nonverbal and affective verbal signs, important cues as to his feelings.

(2) It is not necessary that you respond to every comment given by a person. A smile, or a nod, will communicate your interest in the person. When the appropriate opportunity arises to reflect feelings, only then should you attempt this skill.

(3) Reflection of feeling is appropriate only if you have listened for and have identified or found instances of expression of feeling. Suggestions (1) and (2) will allow you to communicate to the person that you accurately sense the world as he is feeling and perceiving it. This becomes clear to the person when you reflect his feeling by restating what he is experiencing in your own words.

2. Summarization of Feeling

This skill is used to recapitulate, condense, and clarify what another person has said. A summarization of feeling is therefore similar to reflection of feeling. A summary of feeling covers a longer time period and involves a broad range of feelings which the other person has expressed. Instead of noting only one or two immediate feelings, you should note the overall emotional dimensions expressed by the person and then summarize them in a meaningful form to him.

Functions: A summary which integrates the emotional aspects of what a person has been discussing serves at least three functions:

- (1) It may help the person to focus on the single idea or feeling in his overall communication which concerns him most.
- (2) It may serve as a stimulus for further talk on the issue.
- (3) Summarizing what you think you have heard often helps you find out whether or not you are perceiving the person correctly.

A summarization of feeling expressed well, and fitting the other's needs is one of your most powerful tools to convey that you are with him, have empathy*, and can understand how he is feeling at the present moment.

* Empathy is understanding. Empathic understanding refers to a "helper's" ability to allow himself to identify with the experience of another person and communicate understanding that he is "tuned in" to the person who requests help. Empathic understanding implies an ability to "get with" another person to such an extent that you understand almost exactly how he thinks, feels, and acts. In effect, to empathize with another person involves trying to see his world and his problems through his eyes. Such understanding can be communicated through both talk and action.

(cont'd on page 9:4)

Assignment: (To be discussed in class) When you are using the affective communication skills of reflection and summarization of feeling, you will find it helpful to have a working vocabulary of adjectives, synonyms, and descriptive behaviors at your fingertips. Behaviors in the affective domain can be divided into three major categories: positive, negative, depressive, or anxious, and hostile. There are also behaviors which can only be categorized as "doubtful" until we get further information to clarify the meaning of the behavior.

You will find listed below, a series of words generally regarded as conveying an affective meaning. For each affective word, place an example of an adjective or synonym in the first blank column, and an example of an associated behavior in the second blank column. Three examples are provided. You will probably find that you will be repeating some of the terms. This is because we often manifest similar behaviors to express closely-related affective feelings.

<u>Affective Word</u>	<u>Adjective or Synonym</u>	<u>Behaviors from which to infer affect</u>
happy	joyful	smiling
upset	edgy	crying
annoyed	indignant	arguing
proud		
affectionate		
fond		
thankful		
lonely		
dull		
bored		
afraid		
sad		
irritated		
furios		
nasty		
resentful		
stubborn		

Note from page 9:3 cont'd

The concept of empathy is of crucial importance to our workshops. We believe that once you have acquired affective skills in your behavioral repertoire and once you have learned how to use them appropriately, then you will be communicating empathically. There are, as you might expect, several levels of empathy. Empathic communication simply means that you are responding at least at the same level as the other person.

Can you think of instances where an expression would reflect various types of affect, depending on the surrounding circumstances? For example, "Thank you" "So what!" "Fine work".

Self-Test - Reflection of Feeling:

In the examples below, you will have an opportunity to select the alternative which indicates that you understand the other person's attitude, the situation as it appears to the person. The best alternatives to the problems are listed on the following page. Reasons for rejecting other choices are also given.

Example 1:

"So I'm wondering if you can help me to find a new topic for my assignment" ...(pause) "I suppose if I did find one, I'd bungle things again"

- a. Are you sure that it is necessary to abandon your present topic choice?
- b. You feel that it's pretty futile to try another topic?
- c. What other topics have you been considering?

Example 2:

"What do you think I ought to do--drive off a bridge, or look for another university to flunk out of?"

- a. There just doesn't seem to be any way out!
- b. Have you applied to other universities?
- c. Have you thought about trying a college where there would be a little less competition, or perhaps applying to a Technical school, or an engineering school, where the curriculum is more to your liking?

Example 3:

"You know, it's a funny thing, but when I go in to write an examination, I just feel shaky all over! It's the silliest thing! Why should I do that?"

- a. Are you an anxious person in many situations?
- b. How shaky do you become?
- c. This reaction puzzles and concerns you!

Answers to Self-Test - Reflection of Feeling:

Example 1: The correct answer is b

In the first example, responses a and c seek additional information from the helpee* without giving adequate recognition to his feelings. Response b accurately reflects the feeling being expressed.

Example 2: The correct answer is a

Responses b and c provide suggestions as to what the helpee might do, without giving adequate recognition to the feeling of discouragement which the helpee is experiencing. Response a accurately reflects the helpee's feeling.

Example 3: The correct answer is c

Responses a and b seek additional information, whereas in response c, the gist of the helpee's expression is caught and rephrased in fresh words.

*helpee - In a classroom situation, the helpee would most likely be a student. The helpee could also be one of your peers or superiors. In the larger social environment, the helpee could be a friend, relative, stranger--in short anyone who has come to you with a problem or a confidence.

3. Paraphrasing

When utilizing this technique, you will be attempting to feed back to the person communicating with you, the essence (content) of what he has just said. This skill is extremely functional in clarifying confusing content, tying a number of recent comments together, highlighting issues by stating them more concisely and checking one's perceptions.

The following are some good examples of accurate paraphrasing;

(i) Helpee: I can't figure my roommate out. One day she might whirl around the apartment cleaning and straightening up! The next day, she is just as likely to ignore the dishes in the sink, leave her clothes in heaps, etc.

Helper: She's pretty inconsistent then.

(ii) Helpee: Every day there is something new to do. There must be ten different activities going on at any one time around here.

Helper: So there are lots of activities for you to choose from.

(iii) Helpee: He's really a useless professor. He still hasn't got his doctor's degree; he's had very little experience in the schools, and he's having problems with his marriage!

Helper: You don't think he is very competent.

(iv) Helpee: He is supposed to be an authority, yet he's mixed up all the time. He talks as if everything he says is true, but he's quite uncertain a lot of the time.

Helper: You feel that if a man gives you the impression that he knows everything, then he should know everything.

Poor paraphrasing occurs when you add something new to the content of the other person's communication.

Go back through the list of good examples of paraphrasing on this page and develop inappropriate paraphrases which might lead the conversation off on new, perhaps irrelevant, paths. We will discuss these examples in session #9.

4. Summarization of Content

If you use this skill correctly, you will be attempting to recapitulate, to condense, and to crystallize the essence of what another person has said to you. A summary differs from a paraphrase in that the time interval covered by a summary is substantially longer than that of a paraphrase. A paraphrase deals with a person's last few sentences or a short "paragraph" of sentences. A summary puts together a number of client paragraphs, or an entire phase of a group or dyadic discussion. A summary may also cover an entire discussion.

Functions: The function of a summary of content are:

- (1) It may make more concrete and more coherent the message or communication of the person you are trying to understand.
- (2) This understanding resulting from accurate summarization may lead to further exploration of the particular topic or area.
- (3) It serves as a check on your understanding of material discussed over a substantial period of time.

Uses: Examples of situations in which a summarization of content may be helpful are:

- (1) When the other person continues a conversation which originated in a previous meeting, it is helpful to both of you if you can recall the main points in that conversation.
- (2) When you have been unable to follow the conversation (i.e. presentation of the topic may be confusing, lengthy, or rambling).
- (3) When the speaker seems to have exhausted the topic.

Timing of the summary statement is important. You may use paraphrases, open-ended questions, minimal encouraging cues, etc., to keep the speaker talking until you decide that it is an appropriate time to present a summary statement.

RESPONSE COUNT OBSERVATION SHEET

Name of observed: _____ Name of observer: _____

Observation # ☐ 1st ☐ 2nd Date: _____

Skill Cluster #2 - SELECTIVE LISTENING SKILLS

Try to keep as accurate a record as possible of the number of times the target behaviors occurred, and whether or not these behaviors were appropriately used. At the end of the 5 minute observation period check off in the far right-hand columns your judgment of how well the particular skills were used over the entire session. You should also do this for the Basic Helping Skills. Please note that there is a space for your general comments on the performance, as well as a rating of the overall performance (teaching effectiveness).

Skill	Response Count (Gps of 5 min)	Overall Performance of skill	
		Approp.	Inapprop.
SELECTIVE LISTENING SKILLS			
REFLECTION OF FEELING Appropriate Inappropriate			
SUMMARIZATION OF FEELING Appropriate Inappropriate			
PARAPHRASING Appropriate Inappropriate			
SUMMARIZATION OF CONTENT Appropriate Inappropriate			

BASIC HELPING SKILLS (Rate Appropriate/Inappropriate only--No count

	<u>Approp.</u>	<u>Inapprop.</u>
Eye Contact	_____	_____
Posture/body position	_____	_____
Facial Expression	_____	_____
Verbal Message	_____	_____
Verbal Continuity	_____	_____
Open-ended questions	_____	_____
Encouraging cues	_____	_____

RESPONSE COUNT OBSERVATION SHEET CONTD

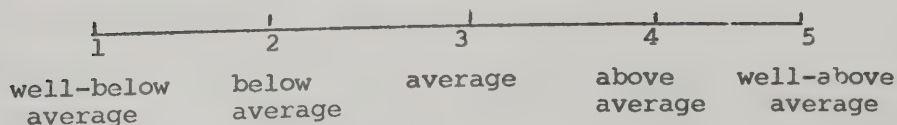
Note: Most of your energy and time during the observation period will be taken with recording Selective Listening Responses. However, you will find that you also have a general impression on whether or not the basic skills were used appropriately. This information will be helpful to the participant, so please try to do this rating at the same time you are doing the inappropriate/appropriate rating for the Selective Listening Skills (i.e. After the 5-minute observation period!)

General Comments on Performance:

(praise or criticism of one or more skills; suggestions for improvement; indications of improvement (if 2nd observation)).

Rating of Overall Performance:

(in terms of appropriateness) i.e. effectiveness



RATINGS OBSERVATION SHEET

Name of Observer: _____ Observed: _____

Observation #: 1st 2nd Date: _____

Skill Cluster #2 - Selective Listening Skills

Instructions: Circle the number that best indicates your judgment of the appropriate use of the skills listed below (i.e. how well the person you observed used the individual skills). The degree of appropriateness accorded each number on the 5-point scale is noted on the back of this sheet. As past of your checklist, we are also including the Basic Helping Skills. Your assessment of these skills will be to simply indicate whether or not they were used appropriately. There is also space for general comments, and a rating of the overall performance (teacher-effectiveness).

Selective Listening Skills

Reflection of feeling	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Summarization of feeling	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Paraphrasing	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Summarization of content	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>

Use of Basic Helping Skills

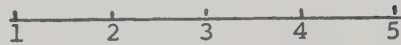
	<u>Appropriate</u>	<u>Inappropriate</u>
Eye contact	_____	_____
Posture or body position	_____	_____
Facial expression	_____	_____
Verbal Message	_____	_____
Verbal continuity	_____	_____
Open-ended questions	_____	_____
Encouraging cues	_____	_____

Ratings Observation Sheet Cont'd

General Comments on performance:

(praise or criticism of one or more skills; total performance: suggestions for improvement?)

Rating of Overall Performance:
(in terms of appropriateness)



Key to rating scale:

- 1 - well-below average (inappropriate use of skill(s) ineffective performance)
- 2 - below average
- 3 - average
- 4 - above average
- 5 - well above average (highly appropriate use of skill(s) effective performance)

SESSION 10 and SESSION 11

These are the Microtraining Workshops for Skill Cluster #2 - Selective Listening Skills. Please consult with your instructor on the nature of your role in these Workshops.

SESSION 12 and SESSION 13Introduction:

Please read pages 12:2 to 12:10, and make notes on any points that may be ambiguous or which need elaborating. We will discuss these during Session #12. Don't forget to complete the exercises. We will discuss these in class if time permits. Sessions #12 and 13 will cover skill clusters #3 and #4. We will need two discussion-demonstration sessions to adequately cover these related skill clusters, before we can proceed to the microtraining workshop sessions!

Skill Cluster # 3

Facilitative skills which encourage open expression of feelings and content and the sharing of personal experiences

Skill cluster 1 and 2 focussed on (1) your use of facilitative skills which enabled the person seeking your guidance to communicate his problem to you; (2) your ability to listen selectively and to reflect your understanding of this communication back to the person seeking help.

Skill cluster #3 shifts the emphasis from elaboration and understanding of the helpee's message, to your effectiveness in communicating messages to others. The previous workshops have concentrated on determining what the helpee is really saying and helping him express himself more clearly. However, as a helper you must do more than listen and communicate that you are listening. You must also learn to express yourself and your ideas clearly and relevantly. This can be done most effectively through the use of three inter-related skills: open expression of feeling, open expression of content; sharing of personal experiences (cognitive and affective); and perception checking.

1. Open expression of feeling - Open expression of content

The use of open expression of feeling and content is appropriate when your communication with another person or group has passed the initial stages. That is, you have established an interactive pattern of communication. Your statements should now provide helpful information to the person seeking advice. These statements should be expressed in a clear, unambiguous and logical (organized) form. If you do not express yourself openly, the helpee may leave your company with considerably more problems than he started out with!

There are many ways to make your verbal communication forthright and open. For example, you can make reference to your own experiences (affective, cognitive, or motor) to clarify or illustrate a suggestion you have just made. These references can be to a newspaper article or book you have read, a film you have seen, or a conversation with an individual or group, etc. Your personal views or values relating to a problem area may also clarify an otherwise ambiguous statement.

Regardless of what you say, you should leave the listener with the impression that his reaction to your openness is an important and necessary part of the communication.

When expressing your feelings, or content knowledge, you will find it helpful to incorporate some of the non-verbal

communication skills referred to in earlier workshops. The impact of either verbal or non-verbal messages can sometimes be misread or diminished in importance when used alone. Skilful and appropriate combinations of nonverbal and verbal behaviors can therefore make a specific communication more meaningful to the listener. For example, to emphasize your verbal statement you may shrug your shoulders, bang the table, throw up your hands, etc.

The skill of open expression of feeling and open expression of content are analogs to the Selective Listening Skills, with the exception that you are now placing emphasis on your own affective and cognitive messages. Here are two examples:

Expression of feeling:

One of my favorite teachers was Miss Jones. I really liked her. She seemed to understand me. It made me feel good just to be in her class. I really wanted to do my best for her.

Expression of content:

One of the most effective teachers I had in high school was the chemistry teacher, Miss Jones. Her lectures were factual and organized. The laboratory assignments were relevant extensions of the lectures.

Exercises:

1. An understanding of your own feelings is necessary in order to understand the feelings of others. Self-understanding includes attending to and being able to express your own emotions or feelings. The ability to identify and express your own emotions should facilitate your ability to recognize emotional expression in others.

Keeping the above statement in mind, write a short paragraph (use the back of this page) describing in affective terms one of the following events: Try to describe the situation as you "felt" it, i.e. as you emotionally experienced it!

- a conversation in the hall
- an argument you had with your professor
- an argument you had with your close friend
- a film you attended recently
- an event of your own choice

2. There are many occasions where it is important for you, as a helper to be able to express cognitive content, without recourse to feeling or affective statements.

Please rewrite the above description of an event, so

that it now reflects the cognitive description or point of view of the incident. Again, restrict yourself to one paragraph.

2. Sharing of personal experiences

This skill is closely related to open expression of feelings and content inasmuch as you are using these skills in order to share your personal experiences. The use of open expression skills will permeate your entire ongoing interaction. However, there will only be certain situations where it is appropriate to share a personal experience with the listener.

Sharing your personal experience with the helpee indicates that you feel it is important to communicate your ideas at this particular point in the interaction. It should also convey the impression that you feel there is some benefit to be derived by the helpee from this personal accounting. One of the major reasons for using this skill is to gain further information on the nature of the helpee's problems by comparing it with an experience of your own. It can also be used effectively in the illustration of a suggestion, recommendation, or interpretation you have made to the helpee. If you use this skill, you must be careful that you link the experience with the helpee's problem. That is, you indicate to the helpee in an indirect fashion why you have used the sharing experience, and how it may relate to his problem. Again, the sharing experience should be relevant, and should facilitate productive ongoing communication from the helpee. One of the most useful skills in accomplishing this "linking" function is the skill of perception checking (discussed on page 12:5).

Both verbal and nonverbal behaviors are important aspects of sharing. The shared experience should be explicit, complete, and well-organized so that the listener has sufficient information to understand what you are feeling and thinking during your communication. Understanding of your communication will be facilitated by the appropriate use of summarization and paraphrasing.

Sharing means that you are allowing the other person to empathize with you and to share your experience. Through appropriate use of the basic attending/helping skills (verbal enthusiasm, attentive posture, etc.) the listener should feel that you are committed to what you are saying. When you are sharing your experiences, be aware of the ongoing effect of your communication. The listener's attending behaviors, minimal encouraging cues, uses of silence etc., will provide you with valuable cues as to the relevance of your message! If the helpee looks bored, is restless, or has fallen asleep

your sharing experience was probably not relevant, was disorganized, and ... too long!

Exercise: (to be discussed in class)

Can you think of a relevant personal experience you could share with another person in one of the following situations: Make sure you are not simply sharing an experience without trying to link it with one of the aspects of the problem.

- poor memory for names. This is a source of embarrassment for the helpee, especially when an introduction seems to be necessary, and unavoidable.
- difference of opinion with in-laws
- fear of public-speaking
- your own choice

3. Perception checking

One of the easiest (and most effective) ways to ascertain whether you are understanding the helpee's feelings and the information he is passing to you is to ask. In most cases, you will find that he will give you an honest answer. (Your own openness should act as a model for his behavior!) If you feel that the helpee is being less than honest with you, perhaps you are being too threatening. Try to rephrase your question, and see if he responds in a more open way. You should also convey to him (indirectly) that his openness and honesty is very important to the resolution of his problem. Perception checking should be carried out at regular intervals throughout your communication. Don't wait until the end of the interview to ask whether your understanding of his message is accurate! On the other hand, you can over-use this skill to the point where it becomes very annoying to the helpee. As a rule of thumb, perception checking is appropriate whenever you feel a consensus of opinion is necessary. Appropriate use of the skill indicates to the helpee that you are concerned with the correctness of your suggestion or interpretation.

Examples of perception-checking questions are:

"Am I right?" "Do you agree?" "What is your reaction to this suggestion?"

Skill Cluster # 4

Integrative skills which allow for a final statement and suggestions for resolution of the problem

This is the most complex of the facilitating skills. It assumes that you have attained competency in the use of skill clusters # 1, 2, and 3.

Integrative skills involve your drawing together all of the salient points in a dyadic or group communication. Having either overtly or covertly made such a summary, you should then proceed to interpret the total information (conveyed by the vocal and non vocal behaviors of the helpee) as it relates to the stated problem. It is perhaps most helpful to the helpee if you first try to present to him in a non-directive, non-threatening way, a number of alternative points of view from which the problem can be attacked. With his help you can offer a number of specific courses of action. The specific courses of action should be within the present capability range of the helpee. That is, be sure that the first steps in the plan of action will result in a high probability of success. As the helpee achieves success at these non-threatening levels of action, he can then proceed to implement other steps. In other words, make the course of action realistic!

Your closing remarks should leave the door open for the helpee to contact you if he needs further guidance.

In summary, the integrative skills involve:

- (1) summarization of the various aspects of the problem;
- (2) accurate interpretation of the problem - determined by asking the helpee;
- (3) presentation of alternative points of view from which the problem could be attacked;
- (4) presentation of suggestions for action;
- (5) involvement of client in a consensus arising out of (3) and (4), and in the compilation of a reasonable action plan;
- (6) Closing remarks, which are friendly, inclusive, and leave the door open for further meetings.

RESPONSE COUNT OBSERVATION SHEET

Name of Observer: _____ Name of Observed: _____

Observation #: ☐ 1st ☐ 2nd Date: _____

WORKSHOP #3 - Skill Clusters #3 and #4

Try to keep as accurate a record as possible of the number of times the target behaviors occurred, and whether or not these behaviors were appropriately used. At the end of the 5 minute observation period check off in the far right-hand columns your judgment of how well the particular skills were used over the entire session.

<u>Skill</u>	<u>Response Count</u> (Gps of 5 1111)	<u>Overall Performance of Skill</u>	
		<u>Approp.</u>	<u>Inapprop.</u>
OPEN EXPRESSION OF FEELING Appropriate Inappropriate			
OPEN EXPRESSION OF CONTENT Appropriate Inappropriate			
SHARING OF CONTENT <u>OR</u> FEELING Appropriate Inappropriate			
PERCEPTION CHECKING Appropriate Inappropriate			
ACCURATE SUMMARIZATION OF PROBLEM AS STATED BY HELPEE Appropriate Inappropriate			
INTERPRETATION OF PROBLEM Appropriate Inappropriate			
PRESENTATION OF ALTERNATIVE POINTS OF VIEW Appropriate Inappropriate			
PRESENTATION OF SUGGESTIONS FOR ACTION Appropriate Inappropriate			
INVOLVEMENT OF HELPEE IN CONSENSUS AND ACTION PLAN Appropriate Inappropriate			
CLOSING REMARKS Appropriate Inappropriate			

RESPONSE COUNT OBSERVATION SHEET CONTDBASIC HELPING SKILLS

	Approp.	Inapprop.
Eye Contact		
Posture/Body Position	_____	_____
Facial Expression	_____	_____
Verbal Message	_____	_____
Verbal Continuity	_____	_____
Open-Ended Questions	_____	_____
Encouraging Cues	_____	_____

SELECTIVE LISTENING SKILLS

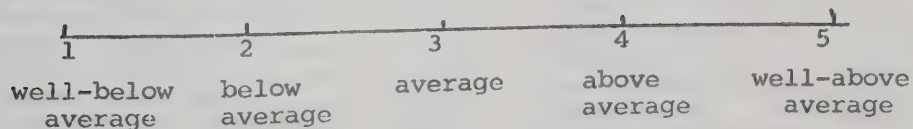
	Approp.	Inapprop.
Reflection of feeling		
Summarization of feeling	_____	_____
Paraphrasing	_____	_____
Summarization of content	_____	_____

General Comments on Performance:

(praise or criticism of one or more skills; suggestions for improvement; indications of improvement (if 2nd observation)).

Rating of Overall Performance:

(in terms of appropriateness)
i.e. effectiveness



RATINGS OBSERVATION SHEET

Name of observer: _____ Name of observed: _____

Observation #: ☐ 1st ☐ 2nd Date: _____

WORKSHOP # 3 - Skill Clusters #3 and #4

Open Expression of Feeling	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>
Open Expression of Content	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>
Perception Checking	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>
Accurate Summarization of Helpee's problem (as stated by Helpee)	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>
Interpretation of Problem	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>
Presentation of Alternative Points of View	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>
Presentation of Suggestions for Action	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>
Involvement of Helpee in Consensus and Action Plan	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>
Closing Remarks	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div>

The following CHECKLIST may be helpful to you in completing the general comments (Over). Do not feel you must use every item. Only relevant comments are useful.

BASIC HELPING SKILLS

	App.	Inapp.
Eye contact	_____	_____
Posture/Body Posit.	_____	_____
Facial expression	_____	_____
Verbal message	_____	_____
Verbal continuity	_____	_____
Open-Ended questions	_____	_____
Encouraging cues	_____	_____

SELECTIVE LISTENING SKILLS

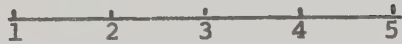
	App.	Inapp.
Reflection of feeling	_____	_____
Summarization of feeling	_____	_____
Paraphrasing (content)	_____	_____
Summarization of content	_____	_____

Ratings Observation Sheet Cont'd

General Comments on performance:

(praise or criticism of one or more skills; total performance: suggestions for improvement?)

Rating of Overall Performance:
(in terms of appropriateness)



Key to rating scale:

- 1 - well-below average (inappropriate use of skill(s) ineffective performance)
- 2 - below average
- 3 - average
- 4 - above average
- 5 - well above average (highly appropriate use of skill(s) effective performance)

SESSION 14 and SESSION 15

These are the Microtraining (Microcounselling) Workshops covering Skill Clusters 3 and 4.

This marks the end of the Microcounselling Workshops. Session #16 will be an informal discussion on microcounselling. We will be taking a critical look at what we have learned during the first three workshops. This will be an important session, inasmuch as the Microteaching section of the course assumes that we have learned what the affective communication skills are, and how to apply them in a dyadic situation. That is, we will be trying to transfer these skills to a classroom environment!

SESSION 17

Introduction:

This session will prepare us for the first of three Microteaching Workshops. Please make sure you read the preparatory materials for this session (17:2 to 17:10). During the discussion-demonstration session, we will attempt to answer your questions.

This session will cover a discussion of:

- (i) Teacher effectiveness (including use of teacher-effectiveness rating scale);
- (ii) Teaching methodology (including a comparative analysis of group methods).

We will also discuss the format for the second section of the course.

Session 17 will conclude with a demonstration of skill application to a 5 minute lesson.

1. Teacher Effectiveness

Independent raters - Instructions

Current educational research is equivocal on the elements which constitute teacher effectiveness. There is some agreement, however, that certain specific teaching skills facilitate the teaching-learning process. The complex act of teaching can conveniently be described as inter-related behaviors from three domains: the affective, cognitive, and psychomotor domains. For our purposes, we will be looking at the affective and cognitive behaviors involved in teaching, and will include in those behaviors the necessary psychomotor components.

In an effort to arrive at an evaluation of teacher effectiveness, we would like you to rate the performance of a number of your peers. You will be asked to rate each student on three separate scales; (1) cognitive effectiveness; (2) affective effectiveness; (3) overall teacher effectiveness.

Cognitive effectiveness will be defined operationally as the appropriate use of the following skills: instructional objectives; an organized lesson, in logical sequence, complete, and showing evidence of following a lesson plan; summarization of main points; accurate, unambiguous presentation of subject matter; adequate, correct answers to student questions; appropriate introduction of self-tests, questions; relevant use of audio-visual aids, etc.

Affective effectiveness will be defined operationally as the appropriate use of the following skills: non-verbal and verbal attending behaviors (eye contact, body posture, gestures, verbal quality, verbal expression, facial expression); arousal of student interest and motivation; involvement of students in meaningful interaction whenever appropriate; use of first-names; ability to respond empathically to individuals and to the group; communication to the group of their importance in meaningful interaction.

Overall performance will be defined as the degree to which the lesson facilitated or inhibited the learning process. Two helpful questions relating to this judgment would be: as a member of the group, how much did you learn? did the interaction of the group indicate that the lesson facilitated or inhibited learning?

In summary, we are asking you to rate the individual performance on three criteria: the affective or feeling component; the cognitive content and organization; and the competency of the overall performance.

The Rating Scales

A five-point scale will be used in rating the teaching performance. The scale allows you to rate the performance on half point intervals between 1 and 5.

The application of the scale to each of the three ratings will illustrate the differentiation between each level on the scale.

Affective Behavior Rating:

- Level 1 The affective responses used by the teacher detracted significantly from the lesson. No attempt to communicate empathically was observed. Interaction was one-way (teacher to class).
- Level 2 The teacher communicated some obvious surface affective feelings. These affective responses were not constant, i.e. inappropriate and appropriate examples of affective skills. The net effect of these affective responses was to subtract from the total communication.
- Level 3 The teacher's affective responses were generally appropriate, and were interchangeable with those of the students. These behaviors facilitated two-way communication. However the direction of the process was predominantly from teacher to student(s) and back to teacher.
- Level 4 The teacher's affective responses facilitated understanding and openness in the group, with initiation of affect occasionally from student to teacher, or student to student.
- Level 5 Appropriate two-way affective interaction developed, which was maximally facilitating to an empathic understanding between students and teacher. The affective responses contributed to the lesson, and to a dynamic learning environment.

Cognitive Behavior Rating:

- Level 1 The cognitive content of the lesson was disorganized, and incomplete. The student teacher was not prepared. Questions were poorly answered, interaction was low, and interest level of the lesson and group was low.
- Level 2 The lesson shows some evidence of planning. However, presentation is not organized, main points

are not stressed, and as a result the objectives of the lesson do not seem to relate to what was presented. The student teacher obviously has not practiced the lesson, as timing seems to be a problem. Teacher does not handle questions from the students in a definitive way; i.e. answers are incomplete, and no attempt is made to tie the question into the lesson plan. Cognitive interaction largely one-way i.e. from teacher to students. Presentation minimally effective.

- Level 3 Lesson plan was used. Behavioral objectives were stated. Main points were stressed at the end of the lesson. Objectives of the lesson were reached. However, teacher experienced some difficulty in involving students in discussion; relating questions to overall theme, etc. Presentation was too mechanistic. Little imaginative use of audio-visual aids, blackboard, etc. Average performance. Presentation was controlled and kept within the behavioral objectives (i.e. no attempt to extend the discussion to more complex and dynamic levels.
- Level 4 Well organized lesson. Good summary statements. Interaction of the class facilitated by appropriate use of specific skills (elaboration, questioning, integrating, etc) Presentation extended beyond the parameters or objectives as stated. Imaginative use of audio-visual aids, blackboard.
- Level 5 Well organized and received lesson. High cognitive level interaction developed. Teacher interpreted and guided the discussion in a non-direct way. Highly effective use of cognitive skills.

Overall Performance:

- Level 1 Learning was not facilitated by this teacher's presentation. Cognitive content and skill usage inappropriate. No attempt to facilitate interaction with the students. No attempt to use affective skills.
- Level 2 Some attempt to use both affective and cognitive teaching skills. Little evidence of interaction with group. Minimally effective performance.

- Level 3 Evidence of skillful combination of both affective and cognitive skills. Communication and interaction was directed (one-way), and motivation of the group reflected a rather static learning environment. Technically very little to criticize, but many suggestions on improvement could be offered. Average performance.
- Level 4 Smooth-flowing performance, with very few instances of inappropriate use of affective or cognitive skills. Skillful combination of skills. Group interaction was two-way. Teacher was supportive, empathic and non-directive. This performance was above average.
- Level 5 Performance highly conducive to a dynamic, productive learning environment. Appropriate use and combination of affective and cognitive skills. Effective teaching.

A copy of the Teacher-Effectiveness rating form is attached. Are there any questions on its function or use?

TEACHER-EFFECTIVENESS

RATINGS

Student-Teacher: _____

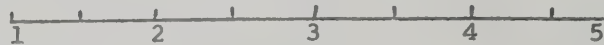
Observer: _____ Date: _____

Lesson Topic: _____ Tchg Method* _____

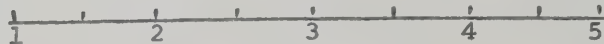
(For: Definition, Instructions on use, and Differentiation between Levels and Scales (affective, cognitive, over-all) see Manual pages 17:2 to 17:5)

Please rate the above student-teacher on the three scales which follow: Please note that the low end of the scale indicates ineffective or inappropriate performance, and that the high end of the scale indicates a judgment of effective or highly appropriate performance. A five-point scale is used in rating the teaching performance. The scale allows you to rate the performance on half-point intervals between 1 and 5.

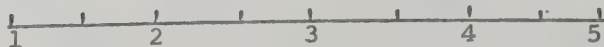
Cognitive
effectiveness



Affective
effectiveness



Overall
Performance



General comments:

* Lecture, Lecture plus discussion, group discussion, Seminar, etc.

2. Teaching Methodology

This final section of the course will concentrate on the application of the Affective Communication Skills to three methods of teaching: the lecture; the lecture plus discussion; the seminar or group discussion.

There are many other methodologies used in teaching. The handout, Comparative Analysis of Group Methods (See Appendix III), lists several of these methods, along with some of the virtues and defects of each method. No single method adequately covers all of the instructional demands of the teaching act. You will probably find that an integrated approach to teaching, incorporating several methods, will be most effective in creating an appropriate learning environment.

A Functional Approach to Teaching:

Each teaching method performs a specific function in the learning environment. The lecture, for example, is advantageous when you are covering basic descriptive material, knowledge of which will be necessary for future classroom activities. The lecture can also be used effectively to present novel information, to summarize material, or to provide a basic framework or overview. The lecture plus discussion divides your lesson presentation into two components: a lecture, providing basic information; and a discussion, which follows from the lecture materials. This method is particularly effective if you are introducing a controversial issue, or if you wish to engage the class in critical thinking and analysis. It can also function as a means by which misinterpretations can be resolved. The seminar or group discussion usually requires that certain preparatory materials have been made available to the students before the scheduled class. The content of these materials may be: an excerpt from text, material presented in an orienting lecture, a newspaper article, etc. Typical instructions would be: assigning the learner the task of compiling a list of questions for possible use in the seminar; assigning groups of students a particular framework or orientation for criticizing the content.

The role of the teacher in the above examples ranges from almost complete control over information output and interaction (lecture), to a non-directed, supportive role (seminar). The role of the student also changes: in the lecture, he is a passive receiver of information; while in the seminar he takes an active role in processing and dealing with the subject matter. The teaching-learning environment changes accordingly--from a relatively static, one-way mode of communication in the lecture, to a dynamic interactive process in the seminar.

Cognitive-Affective Teaching Skills - Interaction:

Affective communication skills can play an important part in each of the three methodologies mentioned above. We will be concentrating on these three methods in our micro-training sessions. The manner in which the cognitive and affective teaching skills interact will vary depending on such variables as: subject matter, size of the classroom group, teaching method, etc. Nonetheless, you will find that even the lecture depends to some extent on the use of effective affective communication skills. Remember experiencing the boring professor who droned on and on in a monotone, with one eye glued to a thick sheaf of notes which he religiously followed (the content of which was taken verbatim from the required text), and the other eye alternating between some imaginary point in space and the clock on the wall!

We hope that the following sessions will make you more aware of the contributions of both cognitive and affective communication skills to that elusive "effective teaching" goal!

Format - Second Section

We will be following a format similar to that used in the first section of the course. Short lectures, preparatory materials, and demonstrations will precede each microtraining session. Demonstrations of the application of affective communication skills to each of the three teaching methodologies will assume an important part of the instruction. In order to receive maximal benefit from the demonstrations, it is suggested that you take an active part in the activities.

During the microtraining sessions, the class will once again be divided into two groups: participants, and observers. Those who participated as an observer in the first half of the course will continue to be an observer in this section. The participants from the first section will be the participants in this section.

Participants -

Participants will assume one of two roles: teacher or student.

Teacher - The task of the teacher will be to conduct a 5-minute lesson. The teacher should attempt to incorporate those affective communication skills which facilitate an effective presentation. At the end of the five minute lesson, the video-taped recording of your lesson

will be played back for the benefit of the group. A 5-minute feedback period then follows, during which both "pupils" and "observers" provide the teacher with constructive criticism on cognitive, affective, and overall aspects of the presentation. The teacher will then repeat the presentation. The aim of the second presentation is to incorporate the suggestions of the group, thereby improving the effectiveness of the lesson. A final 5-minute feedback period follows this second presentation.

The teacher will have an opportunity over the course of this last section to use three different teaching methodologies: lecture, lecture-plus-discussion, and seminar.

Each lesson should follow a plan (refer to the preparatory notes for Session 2 for suggestions). The content of the lesson, and its organization should be formulated in advance of the scheduled presentation. Choice of subject matter, audio-visual aids, etc., rests entirely with the teacher.

Note: You are responsible for handing out any preparatory materials necessary for the seminar presentation. The nature of possible preparatory materials varies: You may choose to circulate a controversial newspaper article, or an excerpt from text. Or, you may wish to construct a problem situation or issue (simulation). Instructional materials must be circulated to all members of the group well in advance of your presentation. Please try to restrict the materials to one page.

Pupil - The task of the pupil is to be a pupil during the 5-minute presentation of the teacher. You will then use the teacher effectiveness rating sheet as a basis for criticism of the teacher's performance. Instructions for use of this rating system are on pages 17:3 to 17:5. In brief, the system allows for an assessment of teaching performance according to three separate scales: (1) cognitive (2) affective (3) overall. The criteria for scoring are also outlined under Teaching Effectiveness, (page 17:2). Please study these instructions carefully before you arrive at any of the microtraining sessions.

Observers - The observers will also use the Teacher Effectiveness System to assess the performance of each teacher. During the first 5-minute presentation by the teacher, the observer observes the performance of the teacher, and the interaction of the pupils. As a result

of these observations (some of which should be noted on the assessment sheet as an aid to the rating assessment and also for use during the feedback session) the observer will then complete the rating scales.

During the video-tape replay, the observers will meet as a group to discuss their assessments. Members of the observer group will be given the opportunity to provide constructive criticism to the teacher during each feedback period.

SESSIONS 18 to 23 - Microteaching

Session 18 will be devoted to demonstrations of the appropriate use of affective communication skills in three distinct teaching methods: the lecture; the lecture-plus-discussion; the seminar. This will prepare you for the three Workshops, of two sessions each, which will also focus on these methodologies. That is, Sessions 18 through 23 will be dedicated to Microteaching.

We have now come to the end of our Microtraining Workshops.

Session # 24 will consist of an informal session to discuss the merits, problems etc., of the Microteaching Workshops.

Session # 25 will act as a balance to Session #2. That is, we will ask you to re-teach the lesson you presented at the beginning of the term. This will give you (and your instructors) some indication on how you have been able to apply the materials and microtraining of this course!

Please read preparatory materials 25:1 for this session.

Session # 26 will consist of a summarization and recapitulation of the course. At this time we will give you feedback on the improvement in your lessons; marks on your reports and/or assignments; and your final grade!

Preparatory Materials: Session # 25

We would like you to re-present the lesson you presented in Session 2. This will give us some indication on whether this course has been effective in helping you to acquire affective communication skills and to apply them in a laboratory-type classroom environment.

Please keep the topic of your lesson presentation identical to that used in the first presentation. You are at liberty however, to change the style of presentation, and even the content (as long as the topic remains the same). Don't forget, you are under a time limit of 15 minutes, and this limit will be strictly controlled.

You may wish to refer back to the preparatory materials of Session 2 in preparing your lesson plan. You will also benefit from a quick review of the manual.

APPENDIX I

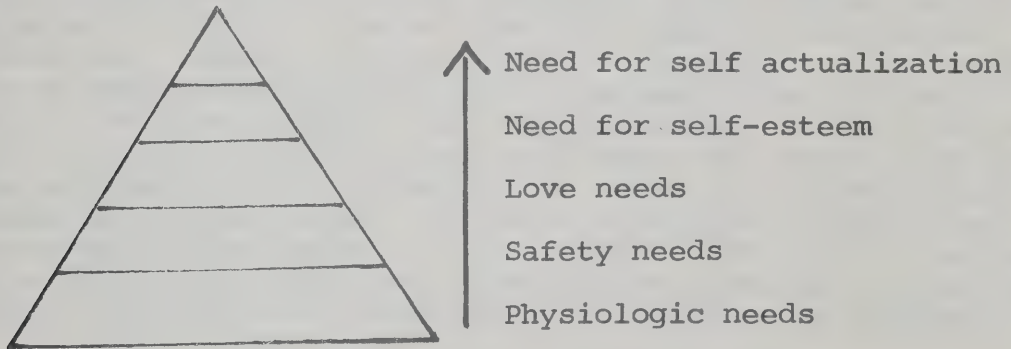
A Book Report On, "The Helping Relationship: Process and Skills"
by Lawrence M. Brammer. (Englewood Cliffs, New Jersey:
Prentice-Hall, Inc., 1973.)

The book, "The Helping Relationship" has as its main long-range goal to help people become better qualified in forming a helping relationship with a person in need of the special skills a helper can offer. As Brammer stated in his introduction: "The basic purposes of this book are to describe a helping process and to provide a kind of road map for interested people--helpers to guide them in thinking through some relevant principles, skills, and research." When speaking of the needs of an individual, it refers to those basic requirements of life which must be fulfilled in order for the individual to live at his optimum level of functioning. If these needs are not met, a problem arises involving the health, both mental and physical, of the individual. Those unmet needs which result in a person functioning at a level which is below the optimum in regard to psychological or mental functioning, often require the assistance of a skilled person in helping the individual recognize and meet those needs in order to function at a higher level. This then describes the necessity of a helping relationship in promoting a person's mental well-being. Brammer feels that most human needs can be met by non-specialists, and this particular book is aimed at assisting these people in recognizing and developing the skills necessary to form a helping relationship. The book is concerned with helping the normal individual to function at a higher level. This book is not concerned with abnormal psychology and psychotherapy, but is more concerned about developing skills for communication in interpersonal relationships.

Brammer stresses the definition of helping as people helping others to reach their personal goals and to strengthen their ability to cope with life. Help is a word that is very difficult to define because it has different meanings to different people. It involves the helper's personality and ideas as well as the specific skills he develops towards better communication. Brammer stresses the importance of the helpee requesting help. Without this there cannot be a helping relationship. The person requiring help must see that he has a problem and that he needs assistance from another person in meeting his needs to overcome the problem. The aim of the helping relationship is to make the helpee self-sufficient and encourage him to help himself in the present as well as in the future. The helper must not come across to the helpee as a "superior" person or the helpee probably will not accept his help. The helper must develop a trusting relationship with his client so that the trusting feeling is mutual. The

importance of establishing this feeling of trust is almost immeasurable. It is the very basis of a helping relationship. Through trust, one will feel accepted, more comfortable in the situation and more understanding. The helper in a trusting relationship sees his position as facilitating and supporting.

Brammer uses the model developed by Maslow in classifying human needs. Maslow describes human needs in relation to a hierarchy consisting of five levels. The levels are physiological needs, safety needs, love and belonging needs, need for self-esteem, and the need for self-actualization. In order for an individual to progress up the hierarchy, he must first meet the needs at the lower level. Therefore, when the individual meets the lower level needs, he moves on to the next level. As described in a diagram Maslow's Hierarchy of Needs would look like this:



The importance of such a theory is the fact that the inability to meet these needs often results in the necessity for another person's help. Thus, a helping relationship. The main levels requiring help in the form of counselling would be the levels involving love needs, need for self-esteem, and the need for self actualization. Brammer feels that by entering into a helping relationship as a helper, one may fulfil the need for self-actualization. He feels that by helping others, an individual may strengthen his own self-image and self confidence, and perform up to the level of his potential abilities.

Brammer describes some of the necessary characteristics which a helper must possess. Some of the personal characteristics are:

1. awareness of self and values
2. feelings of the helper
3. helper as a model
4. interest in people and social change
5. helper ethics
6. responsibility

It is necessary that the helper understand his own feelings and ideas and personal frame of reference. A helper must have this self-awareness. He must understand his concepts and feelings about man, about life and about helping. He must avoid projecting his ideas and values onto the helpee. The helper must be aware of his own needs, and he must have met the need for self confidence. Brammer states that a helper needs a strong ego, which means confidence in his worth as a person. The helper functions also as a model to his helpee. Helpees tend to imitate the behavior of their helper as well as identify with his views and his values. This happens whether we want it to or not. A helper must have a genuine concern for people and must want to help. They need an altruistic attitude. This is a tendency to act for another's benefit as if the other was himself, or helping without getting anything in return. People often tend to help people who have previously helped them. The helper must follow a set of ethical behaviors which reflect on his own morals, society's codes, and the norms of the helping professions. The helper must behave ethically and be responsible or accountable for his acts. He must know his own limits, and must transfer the responsibility of the relationship to a more qualified person if there is a need to do so. A helper needs to be empathic, he needs to project warmth and caring to the helpee, he needs to be open in order to promote self-disclosure, he must respect the helpee's welfare and individuality, he must attempt to be specific rather than general and vague and he needs to be flexible as a helper.

Brammer states that, "every helping person needs a guiding theory to help him make sense out of the complexities in the helping process." This theory becomes the helper's guiding principles. Each helper must develop his own theory base for helping. To help build this theory, he looks at his own experiences in life, he becomes aware of his own needs and values. He must also recognize his own communication styles. He also employs a great deal of common sense in his theory of helping. In his book, Brammer goes on to describe how to go about constructing your own theory base and how it can be useful for the helper when in a helping relationship. Brammer also describes some of the common general theories regarding the helping process.

Brammer describes the helping process as that of a relationship which is built up by means of interview. The interview involves two parties, one the helper and the other the helpee. The helping relationship is an on-going process which is constantly changing. It involves communication between the two participants at both verbal and non-verbal levels. It is through this process of interpersonal communication that the needs of the helpee are recognized and a plan of action to meet these needs is established. Again the importance of

a trusting relationship is stressed. An individual will generally accept the help of a person whom they feel they can trust. The motives of the helper are an important issue here. The helper must show his sincere desire to help. The helpee must feel accepted and valued as a person. The helping process takes the typical approach of problem-solving. Problem-solving involves several steps to reach the desired outcome. Many people have described different steps in problem-solving but basically the steps are the presence of a problem, analyzing the facts, deciding what the real problem is, deciding on a plan of action, and carrying out the plan which is best suited to meet the desired outcome or goal.

Brammer describes the general stages involved in the helping process. They are:

1. Entry: Preparing the helpee and opening the relationship.
2. Clarification: Stating the problem or concern and reasons for seeking help.
3. Structure: Formulating the contract and the structure.
4. Relationship: Building the helping relationship.
5. Exploration: Exploring problems, formulating goals, planning strategies, gathering facts, expressing deeper feelings, learning new skills.
6. Consolidation: Exploring alternatives, working through feelings, practicing new skills.
7. Planning: Developing a plan of action using strategies to resolve conflicts, reducing painful feelings, and consolidating and generalizing new skills or behaviors to continue self-directed activities.
8. Termination: Evaluating outcomes and terminating the relationship.

It is during the first stage of the relationship where the groundwork of trust is laid. A relaxed setting is important to encourage a comfortable feeling and atmosphere. Most helping relationships take the form of casual friendships and informal discussions. The helper must introduce himself to the helpee, by telling the helpee which agency he represents, what qualifications he has, and why he wants to help. All this aids in establishing the trusting relationship.

There are several techniques or skills which one must attain in order to promote a high quality of communication in

an interpersonal relationship. The quality of the communication influences the quality of the relationship. The skill of listening is basic to the relationship. Listening involves not only verbal language but also body language. Attentive and sensitive listening often enhances communication on the part of the helpee. Brammer discusses the importance of an attending behavior on the part of the helper. Attending behavior often encourages the individual to verbalize his ideas and feelings. Other skills involving listening are paraphrasing and clarifying the helpees' messages. Another major skill is that of leading, which helps to encourage the individual to respond to communication. Reflecting is another major skill required for good communication. To reflect is to show the client that we understand his ideas and feelings. Reflecting involves three main areas, feeling, experience and content. The helper must be able to feel the helpee's feelings, recognize what the helpee is experiencing and understand what he is saying. Reflecting assists the helper to gain a better understanding of the individual. The skill of summarizing is one which involves tying all the facts, ideas, and feelings together. This helps to show where the relationship is at and where it should go from there. It aids in showing the helpee that progress is being made. Confronting is another complex skill in helping. It involves the helper recognizing his own feelings and sharing these with the helpee and it also involves different methods of self-confrontation. Interpreting, or explaining the meaning of events to the helpee in order to help them see their problem from a new perspective, is another skill which a helper must possess in order to have an effective discussion with the helpee. This aids in teaching the helpee to be able to interpret his actions and behaviors on his own. The skill involving the passing of information and the sharing of these facts is an important tool in an interpersonal relationship. A good examples of this is giving advice to the helpee. It must be stressed that this should be done with caution because the advice is not always appropriate in every situation. Some special skills are required of a helper when dealing with crisis or stress situations. Comfort and support by the helper is important during such times. Reassuring skills and relaxing skills are important also to help reduce the tension and build confidence in the helpee.

The general goal of a helping relationship is to reach a particular desired outcome. A helper wants positive action by the helpee to show that the desired goal has been met. Again the problem-solving approach to reach the goal must be stressed. Use of the problem-solving approach in changing behavior requires very special skills which usually require a great deal of practice. Skills to aid in changing behavior are such things as modeling, rewarding, contracting, extinguishing, and desensitizing skills.

APPENDIX II

TAXONOMY OF EDUCATIONAL OBJECTIVES

HANDBOOK I: COGNITIVE DOMAIN

Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H.,
 Krathwohl, D. R. London, England: Longmans, Green and
 Co., 1956.

The following is a condensed version of the above Taxonomy. An illustrative educational objective follows the description of each subcategory. Please refer to the original work for details.

KNOWLEDGE

- 1.00 KNOWLEDGE - the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern, structure, or setting. Recall involves little more than bringing to mind the appropriate material. Although some alteration of the material may be required, this is a relatively minor part of the task.
 - 1.10 KNOWLEDGE OF SPECIFICS
 - 1.11 KNOWLEDGE OF SPECIFIC FACTS
 - e.g. The possession of a minimum knowledge about the organisms studied in the laboratory.
 - 1.20 KNOWLEDGE OF WAYS AND MEANS OF DEALING WITH SPECIFICS
 - 1.21 KNOWLEDGE OF CONVENTIONS
 - e.g. To make pupils conscious of correct forms and usage in speech and writing.
 - 1.22 KNOWLEDGE OF TRENDS AND SEQUENCES
 - e.g. Knowledge of the basic trends underlying the development of public assistance programs.
 - 1.23 KNOWLEDGE OF CLASSIFICATIONS AND CATEGORIES
 - e.g. Becoming familiar with a range of types of literature.
 - 1.24 KNOWLEDGE OF CRITERIA
 - e.g. Knowledge of criteria for the evaluation of recreational activities.
 - 1.25 KNOWLEDGE OF METHODOLOGY
 - e.g. Knowledge of scientific methods for studying health concepts.

1.30 KNOWLEDGE OF THE UNIVERSALS AND ABSTRACTIONS
IN A FIELD

1.31 KNOWLEDGE OF PRINCIPLES AND GENERALIZATIONS
e.g. The recall of major generalizations
about particular cultures.

1.32 KNOWLEDGE OF THEORIES AND STRUCTURES
e.g. The recall of major theories about
particular cultures.

INTELLECTUAL ABILITIES AND SKILLS - organized modes of operation and generalized techniques for dealing with materials and problems.

2.00 COMPREHENSION - a type of understanding or apprehension such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other material or seeing its fullest implications.

2.10 TRANSLATION
e.g. Skill in translating mathematical verbal material into symbolic statements and vice versa.

2.20 INTERPRETATION
e.g. The ability to interpret various types of social data.

2.30 EXTRAPOLATION
e.g. Skill in predicting continuation of trends.

3.00 APPLICATION - the use of abstractions in particular and concrete situations.
e.g. Application to the phenomena discussed in one paper of the scientific terms or concepts used in another paper.

4.00 ANALYSIS - the breakdown of a communication into its constituent elements or parts such that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit.

4.10 ANALYSIS OF ELEMENTS
e.g. Skill in distinguishing facts from hypotheses.

4.20 ANALYSIS OF RELATIONSHIPS
e.g. Skill in comprehending the interrelationships among the ideas in a passage.

- 4.30 ANALYSIS OF ORGANIZATIONAL PRINCIPLES
 - e.g. Ability to recognize the general techniques used in persuasive materials such as advertising, propaganda, etc.
- 5.00 SYNTHESIS - the putting together of elements and parts so as to form a whole.
 - 5.10 PRODUCTION OF A UNIQUE COMMUNICATION
 - e.g. Ability to plan a unit of instruction for a particular situation.
 - 5.20 PRODUCTION OF A PLAN, OR PROPOSED SET OF OPERATIONS
 - e.g. Ability to propose ways of testing hypotheses.
 - 5.30 DERIVATION OF A SET OF ABSTRACT RELATIONS
 - e.g. Ability to make mathematical discoveries and generalizations.
- 6.00 EVALUATION - Quantitative and qualitative judgments about the value of material and methods for given purposes.
 - 6.10 JUDGMENTS IN TERMS OF INTERNAL EVIDENCE
 - e.g. The ability to indicate logical fallacies in arguments
 - 6.20 JUDGMENTS IN TERMS OF EXTERNAL CRITERIA
 - e.g. The comparison of major theories, generalizations, and facts about particular cultures.

TAXONOMY OF EDUCATIONAL OBJECTIVES

HANDBOOK II: AFFECTIVE DOMAIN

Krathwohl, D. R., Bloom, B. S., Masia, B. B. New York, N.Y.: David McKay Co. Inc., 1964.

The following is a condensed version of the above Taxonomy. An illustrative educational objective follows the description of each subcategory. Please refer to the original work for details.

- 1.0 RECEIVING (ATTENDING) - The learner is sensitized to the existence of certain phenomena and stimuli: that is, he is willing to receive or attend to them. Three subcategories indicate the continuum of attending levels.
 - 1.1 AWARENESS
e.g. Develops awareness of aesthetic factors in architecture.
 - 1.2 WILLINGNESS TO RECEIVE
e.g. Increase in sensitivity to human need and pressing social problems.
 - 1.3 CONTROLLED OR SELECTED ATTENTION
e.g. Alertness toward human values and judgments on life as they are recorded in literature.
- 2.0 RESPONDING - The student is actively attending. The category describes "interest" objectives, i.e. the desire that a child become sufficiently involved in or committed to a subject, phenomenon, or activity that he will seek it out and gain satisfaction from working with it or engaging in it.
 - 2.1 ACQUIESCENCE IN RESPONDING
e.g. Obeys the playground regulations.
 - 2.2 WILLINGNESS TO RESPOND
e.g. Acceptance of responsibility for his own health and for the protection of the health of others.
 - 2.3 SATISFACTION IN RESPONSE
e.g. Takes pleasure in conversing with many different kinds of people.
- 3.0 VALUING - That a thing, phenomenon, or behavior has worth. This concept of worth is in part a result of the individual's own valuing or assessment, but it is much more a social product that has been slowly internalized or accepted and has come to be used by the student as his own criterion of worth. Behavior is motivated by the

individual's commitment to the underlying value guiding the behavior.

3.1 ACCEPTANCE OF A VALUE

e.g. Continuing desire to develop the ability to speak and write effectively.

3.2 PREFERENCE FOR A VALUE

e.g. Deliberately examines a variety of viewpoints on controversial issues with a view to forming opinions about them.

3.3 COMMITMENT

e.g. Devotion to those ideas and ideals which are the foundation of democracy.

4.0 ORGANIZATION - As the learner successively internalizes values he encounters situations for which more than one value is relevant. Thus necessity arises for (a) the organization of the values into a system, (b) the determination of the interrelationships among them, and (c) the establishment of the dominant and pervasive ones. This category describes the beginnings of a value system. It is subdivided into two levels.

4.1 CONCEPTUALIZATION OF A VALUE

e.g. Forms judgments as to the responsibility of society for conserving human and material resources.

4.2 ORGANIZATION OF A VALUE SYSTEM

e.g. Weighs alternative social policies and practices against the standards of the public welfare rather than the advantage of specialized and narrow interest groups.

5.0 CHARACTERIZATION BY A VALUE OR VALUE COMPLEX - At this level of internalization the values already have a place in the individual's value hierarchy, are organized into some kind of internally consistent system, have controlled the behavior of the individual for a sufficient time that he has adapted to behaving this way; and an evocation of the behavior no longer arouses emotion or affects except when the individual is threatened or challenged. Two aspects constitute the subcategories: (a) the generalization of this control to so much of the individual's behavior that he is described and characterized as a person by these pervasive controlling tendencies, and (b) the integration of these beliefs, ideas, and attitudes into a total philosophy or world view.

5.1 GENERALIZED SET

e.g. Readiness to revise judgments and to change behavior in the light of evidence.

5.2 CHARACTERIZATION

e.g. Develops for regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals.

APPENDIX III

Reproduced, with permission, from: The Psychology of the Learning Group McLeish, J., Matheson, W., Park, J., London: Hutchinson & Co. Ltd., 1973, pp 107-110.

COMPARATIVE ANALYSIS OF GROUP METHODS(1) LECTURE

Virtues

Coverage of fundamental points
Economical, planned and direct analysis of an area
Provides a general framework

Defects

Does not necessarily engage attention or participation
Inefficient and uneconomic of time when books available
Not adapted to individual needs
Tends to present knowledge as a 'closed' system

(2) Group Tutorial

Virtues

The interplay of minds stimulates thought
Combines economy of time and direction of effort with two-way communication
Permits considerable freedom to pursue interests in depth

Defects

Sometimes may appear to be aimless - therapeutic, not creative
Diffident, shy students may not participate
Tends to move slowly over ground to be covered, coverage inadequate

(3) Free Group Discussion

Virtues

Develops a sense of discipline and responsibility in the student group
Provides opportunity for genuine discussion, discovery and development
Enables instructor really to know students

Defects

May serve merely as an emotional release, but is not really a teaching device

Aimless and undisciplined

Often irrelevant to tutor's objectives

(4) Seminar

Virtues

Allows everyone to benefit from others' experience in a systematic framework

Participants are free to conduct research into their particular problem and present the results

Gives diffident members the opportunity to lead in a prepared and structured situation

Defects

Students have inadequate knowledge to contribute successfully

Can be ruined by a poor leader or chairman

Some 'sit back' when own interest has been covered

(5) Individual Supervision (or Tutorial)

Virtues

Students really work

One-to-one interaction creates understanding and good relationship between student and tutor

Individual difficulties can be overcome

Defects

Logistics difficult because of large numbers and limited time

Personal relations between a given tutor and a particular student may not be the best

Perhaps intimidating to student

(6) Role Play

Virtues

Helps with self-expression, lucidity, quick-thinking

Students encouraged to feel as well as to think about different aspects

It can be great fun, and acts to improve human relations

Defects

Artificiality results when 'leader' or 'performers' are poor
Over self-conscious to start with: takes time to learn the
technique

The 'sophisticated' student finds it difficult to cooperate

(7) Laboratory

Virtues

Enables pursuit in depth and development of scientific method
It is learning by experience and concrete activity
Stimulates individual work and research attitudes

Defects

Time-consuming for students

Needs other supporting methods and intensive supervision

May be too desiccated and routinised ('school science')

(8) Demonstration

Virtues

Shows the correct procedure and allows student to analyse it
in detail

Teacher's own failure make useful discussion points - criteria
of excellence are built up

A concrete illustration of a skill is always better than mere
talk about it

Defects

It often leads to a pale copy of what was intended, and may
prevent the student finding his own feet

Student may model performance on that of the teacher and
thus stifle initiative

Illustrates only one way of doing a thing

(9) Case Study

Virtues

Draws in students in group interaction and uses their own
life experience

Realistic discussion of principles in the concrete instance

Provides for emotional development ('insights') as well as
for cognitive understanding

Defects

Irrelevant material remembered

Over-simplification - abstracted from context may be too concrete

Depends on understanding leadership

(10) Project

Virtues

Personal involvement and commitment in depth gives more thorough knowledge

Student must use own resources

Demonstrates a number of different approaches to a single problem

Defects

Time-consuming

Needs careful directing, otherwise may achieve little

May prove great strain on the student if task is substantial

APPENDIX II

Table A - Correlations between
Bales' Rater Pairs*for Teacher
and Group Codings

<u>Subject Number</u>	<u>Pre-Test</u>			<u>Post-Test</u>		
	<u>Correlations</u> <u>Tchr</u>	<u>Group</u>	<u>Rater</u> <u>Pair</u>	<u>Correlations</u> <u>Tchr</u>	<u>Group</u>	<u>Rater</u> <u>Pair</u>
1	.98	.82	4/3	.99	.97	4/1
2	.91	.93	4/3	.91	.99	2/1
3	.91	.80	4/3	.91	.94	4/2
4	.98	.96	4/1	.97	.82	4/1
5	.95	1.00	5/4	.99	.95	4/1
6	.94	1.00	2/1	.96	.99	4/1
7	.98	.98	4/1	.97	.97	4/1
8	.97	.94	4/1	.93	.95	4/1
9	.99	.95	4/1	.99	.93	4/1
10	.86	.82	5/2	.99	.99	4/1
11	.99	.98	4/1	.86	.95	4/3
12	.99	.87	4/1	.80	.99	2/1
13	.99	1.00	4/1	.95	.89	4/1
14	.95	.95	3/1	.95	.82	4/1
15	.99	.98	4/1	.99	.95	4/1
16	.95	.80	4/3	.89	.99	2/1
17	.92	.88	3/1	.95	.92	4/1
18	.97	.84	5/3	.96	.91	4/2
19	.98	.93	3/1	.98	.93	4/1
20	.81	.93	2/1	.96	.99	4/1
21	.98	.93	5/1	.82	.84	4/3
22	.99	.98	4/1	.86	.80	4/2
23	.92	.89	5/4	.93	.83	2/1
24	.95	.97	4/1	.92	.97	4/1
25	.99	.98	4/1	.99	.99	4/1
26	.87	.99	3/2	.90	.92	4/1
27	.97	.81	4/3	.93	.95	4/1

* Indicates the component members of the rating pair: (4/3 = a pair composed of rater #4 and rater #3)

APPENDIX III

Table B - Distribution of Bales' Rater Pairs
for Pre-Test and Post-Test Micro-Lessons

Rater Pair	Pre-Test		Post-Test		Combined (Pre-Post)	
	Tapes #	Coded %	Tapes #	Coded %	Tapes #	Coded %
4/1	11	41	18	67	29	54
4/3	5	19	2	7	7	13
2/1	2	7	4	15	6	11
4/2	0	0	3	11	3	5.5
3/1	3	11	0	0	3	5.5
3/5	2	7	0	0	2	3.5
5/4	2	7	0	0	2	3.5
5/2	1	4	0	0	1	2
5/1	1	4	0	0	1	2
Totals	27	100%	27	100%	54	100%

APPENDIX IV

McLeish/Martin (1975)
Category System for Analysis
 of Communicative Behavior

<u>Operant categories</u>	<u>Definitions</u>	<u>Examples - behaviors included</u>
1. Mand	A verbal operant in which the response is reinforced by a characteristic consequence. The response is therefore under the functional control of relevant conditions of deprivation or aversive stimulation	<u>Vocal</u> 1. "Can you tell me what your name is?" 2. "Forget about that." 3. "Let's stop avoiding the task." <u>Nonvocal</u> 4. Questioning glances 5. Directing gestures, of command, etc.
2. Tact	A verbal operant in which a response of given form is evoked (or at least strengthened) by the actual presence of a particular object, or event, or property of an object or event.	<u>Vocal</u> 1. "His chair is vacant." 2. "The group is anxious." 3. "Here, in this room." <u>Nonvocal</u> 4. Any acknowledgment of an object, or ongoing physical activity, referred to by gestures.
3. Extended Tact	A verbal operant in which a response is generated by physical properties of objects and events where the association between the speaker's behavior and the physical properties is <u>not</u> commonly reinforced by the particular verbal community.	<u>Vocal</u> 1. "Its a bloody morgue" (referring to the group situation). 2. "The preacher said so" (referring to the therapist). <u>Nonvocal</u> 3. Ritualized bowing to the group leader (the gestures are not entirely appropriate to the object actually being referred to.

<u>Operant categories</u>	<u>Definitions</u>	<u>Examples - behaviors included</u>
4. Echoic	A verbal operant in which the response is under the control of verbal stimuli such that the response has formal properties precisely the same as the stimulus.	<u>Vocal</u> 1. Any spoken repetition. 2. Laughter which follows closely an initial burst of mirth. <u>Nonvocal</u> 3. Modelling of postures, gestures, etc, by some other participant.
5. Intra-verbal	A verbal operant in which the response is thematically related, but shows no point-to-point correspondence to the verbal stimulus.	<u>Vocal</u> 1. "We have certain expectations" (follows upon "The group is waiting for something to happen"). 2. "We share a few laughs" (part of an anecdote about friends). <u>Nonvocal</u> 3. Stretching and yawning (behaviors occur during a monologue on fatigue).
6. Dominant control auto-clitic	A verbal operant which calls attention to the speaker or what he is saying.	<u>Vocal</u> 1. "Now." 2. "So." 3. "Well ah'm." <u>Nonvocal</u> 4. Leaning forward or leaning back in chair (attention getting).
7. Negative affective auto-clitic	A verbal operant which indicates a negative emotional reaction to what has been said.	<u>Vocal</u> 1. "No fear!" 2. "I doubt it very much!" <u>Nonvocal</u> 3. Cutting across the flow of communication with a disruptive gesture.

Operant
categories

Definitions

Examples -
behaviors included

8. Informa-
tive auto-
clitic

A verbal operant which clarifies or alters the effect of a given communication but does so without any indication of emotion.

4. Looking away from the speaker.
5. Clicking a cigarette lighter when someone else is speaking.

Vocal

1. "I see where..."
2. "On the other hand..."
3. "However, it could be ..."
4. "I wish ...", etc

Nonvocal

5. Any dramatization or gesture which clarifies other verbal behaviors e.g., a shrug which accompanies the word "confusion."

9. Submissive
control
autoclitic

A verbal operant which indicates passive acceptance.

Vocal

1. A bland "yes".

Nonvocal

2. Attentive listening postures.
3. Direct and continuing eye contact with speaker.

10. Positive
affective
autoclitic

A verbal operant which indicates a positive reaction to what has been said.

Vocal

1. "I agree."
2. "Definitely."

Nonvocal

3. Smiling.
4. Nodding.
5. Laughing at a joke, etc.

APPENDIX V

Rules For Coding -
McLeish/Martin (1975) Operant System

The following rules for coding were used in this study. The rules are a modification of those used by Martin (1973).

1. Wherever possible code Mand, Tact, or Extended Tact.

These categories have priority. Echoics, Intraverbals and Autoclitics are all stimulated by these operants.

Behaviors in these priority categories provide the foundation for human communication.

2. The coding of operant categories is governed by the salience of operant incidence within each 3-second period.

That is, where more than one operant is emitted in the coding interval, the functional saliency of one operant over another determines the final categorization.

3. Code Extended Tact rather than Tact when the operant is under the control of the physical properties of a stimulus occasion, but the relationship between stimulus and operant is not commonly reinforced by the verbal community; and hence, the physical reference of the response is not readily accessible to the listener.

4. Code Extended Tact rather than Intraverbal when the operant is stimulated by the physical occasion rather than a preceding thematically related stimulus.

5. Code Extended Tact rather than Tact when the exact physical situation which would imply a Tact coding is no

longer present in its entirety, but is partial in effect so as to warrant a tact coding, e.g., anecdotes or comments about past or near past.

6. Code single pronouns by themselves as a Tact only when an obvious gesture relates them to physical stimuli. Otherwise do not code single pronouns unless they are considered the salient operant emitted in the time interval.
7. The autoclitic category catches most of what Bales calls "non-verbal" behavior. This category is broken down into five parts to increase its discriminatory power.
 - (a) affective - If a behavior is disruptive (example: clicking cigarette lighter, blowing nose, clearing throat, etc., while another is talking) it is coded as Negative Affective Autoclitic. Positive behaviors such as laughing at a joke, reinforcing head nods, etc., are coded as Positive Affective Autoclitic.
 - (b) control - If there is an obvious attempt to draw attention to oneself (example: lighting a cigarette in a period of silence) this is coded as a Dominant Control Autoclitic. Pointings and dramatizations which accompany spoken operants are usually coded as Dominant Control Autoclitics. If the emitted operant indicates passive acceptance

(i.e. silence, listening) it is coded as Submissive Control Autoclitic.

- (c) informative (task-related) - Autoclitics emitted in a neutral manner by the speaker and which clarify (qualify, or quantify) previously given information are coded as Informative Autoclitics.

8. Coding of single autoclitics:

- (a) Code responses of the form "well", "yeah", "no", "you know" as Dominant Control Autoclitic where the main purpose of the operant is to gain attention. This can usually be ascertained if other responses by the same individual follow such a response.
- (b) Single-word autoclitics other than the initial occurrence in the body of a phrase are generally considered trivial, and therefore not salient unless they serve a distinct function separate from the overall context in which they appear.
- (c) If an initial autoclitic interrupts or cuts across another speaker, it is coded as Negative Affective Autoclitic.

9. Laughter is usually coded as autoclitic - the specific type depending on its specific function. However, in general laughter, only the first person to laugh is given the categorization Positive Affective Autoclitic, the rest being coded as Echoics.

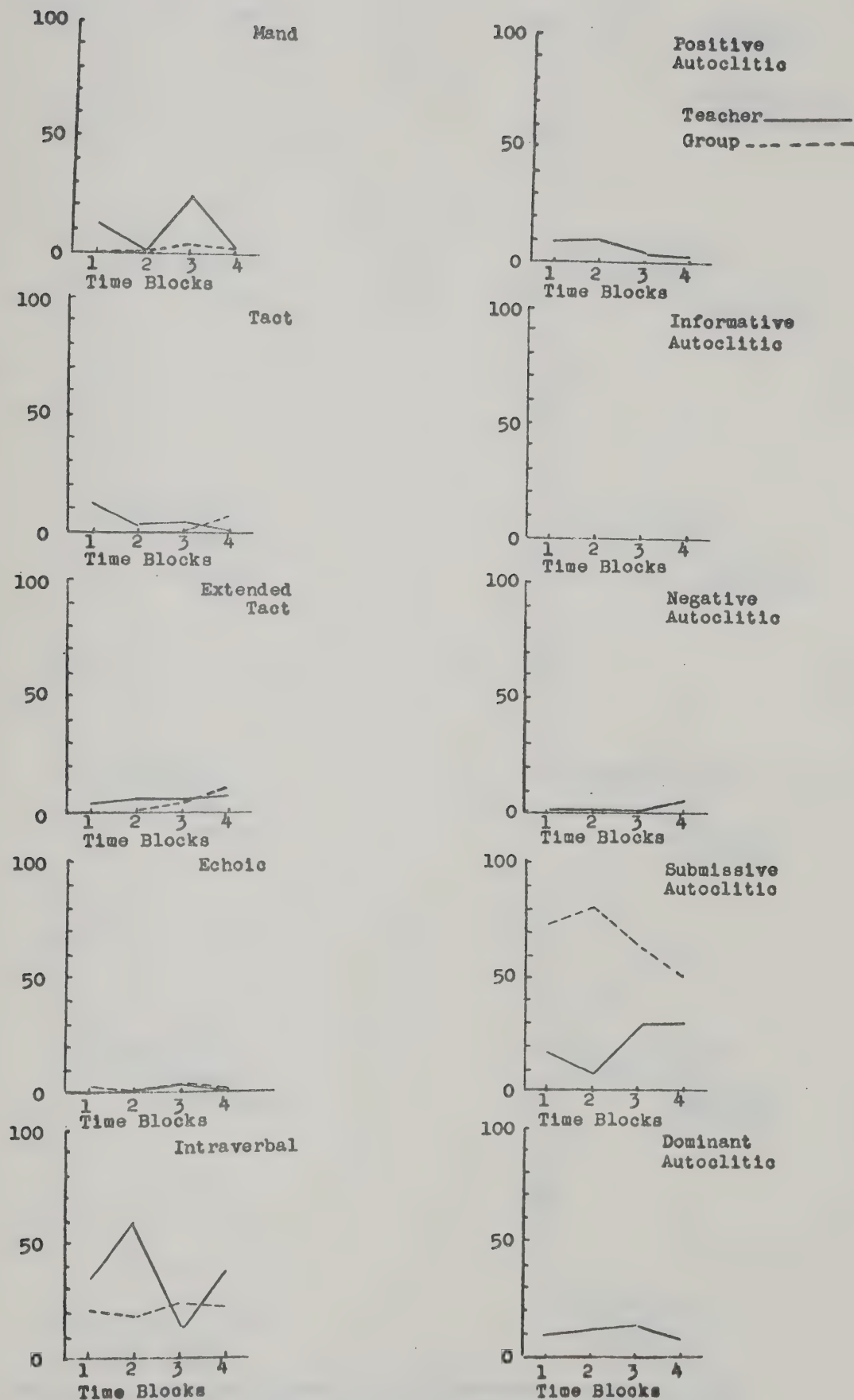


Figure A - Pre-test operant profile, percentage occurrence of operants over time blocks. Case #1 - Chris, Experimental Participant

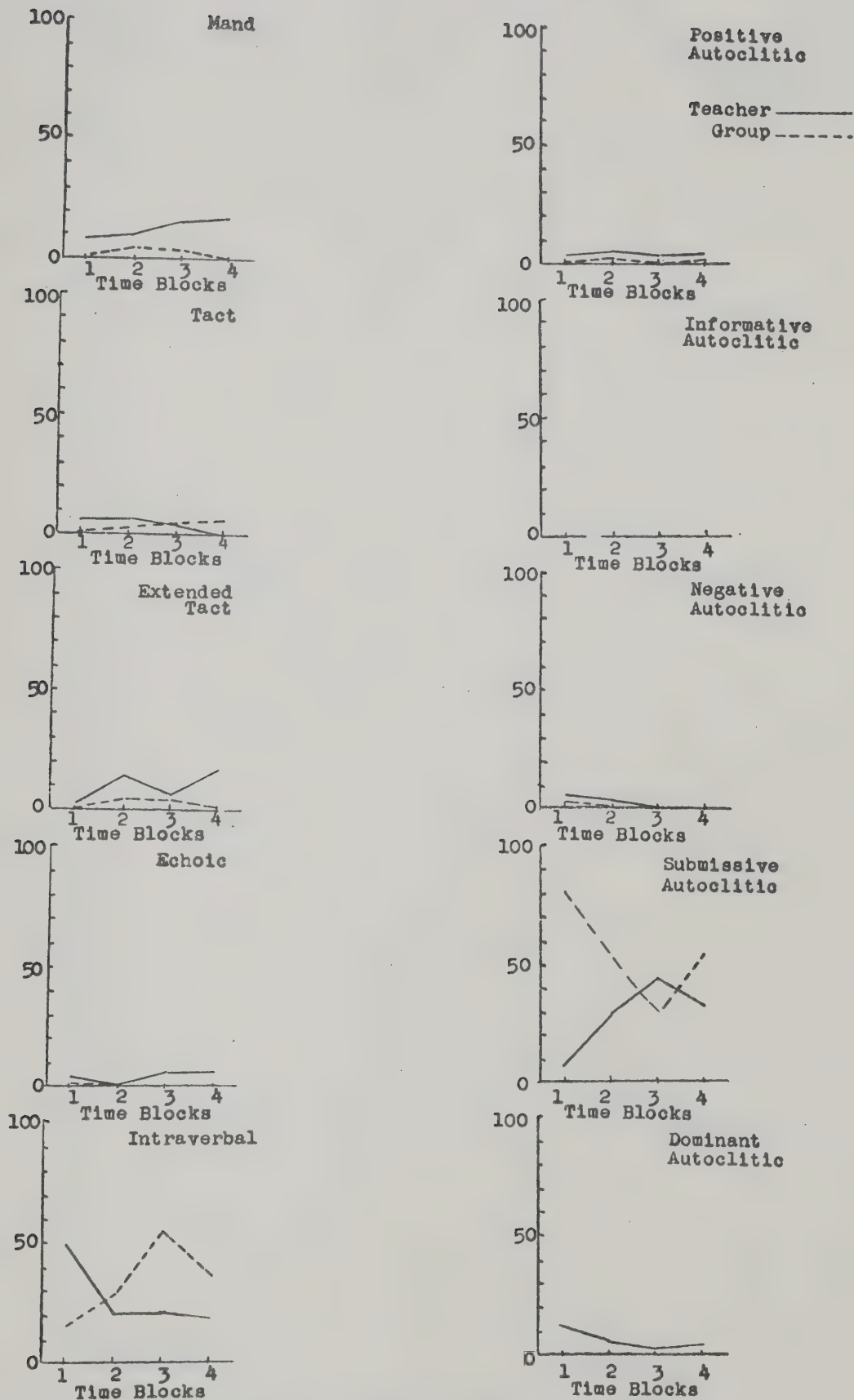


Figure B - Post-test operant profile, percentage occurrence of operants over time blocks. Case #1 - Chris, Experimental Participant

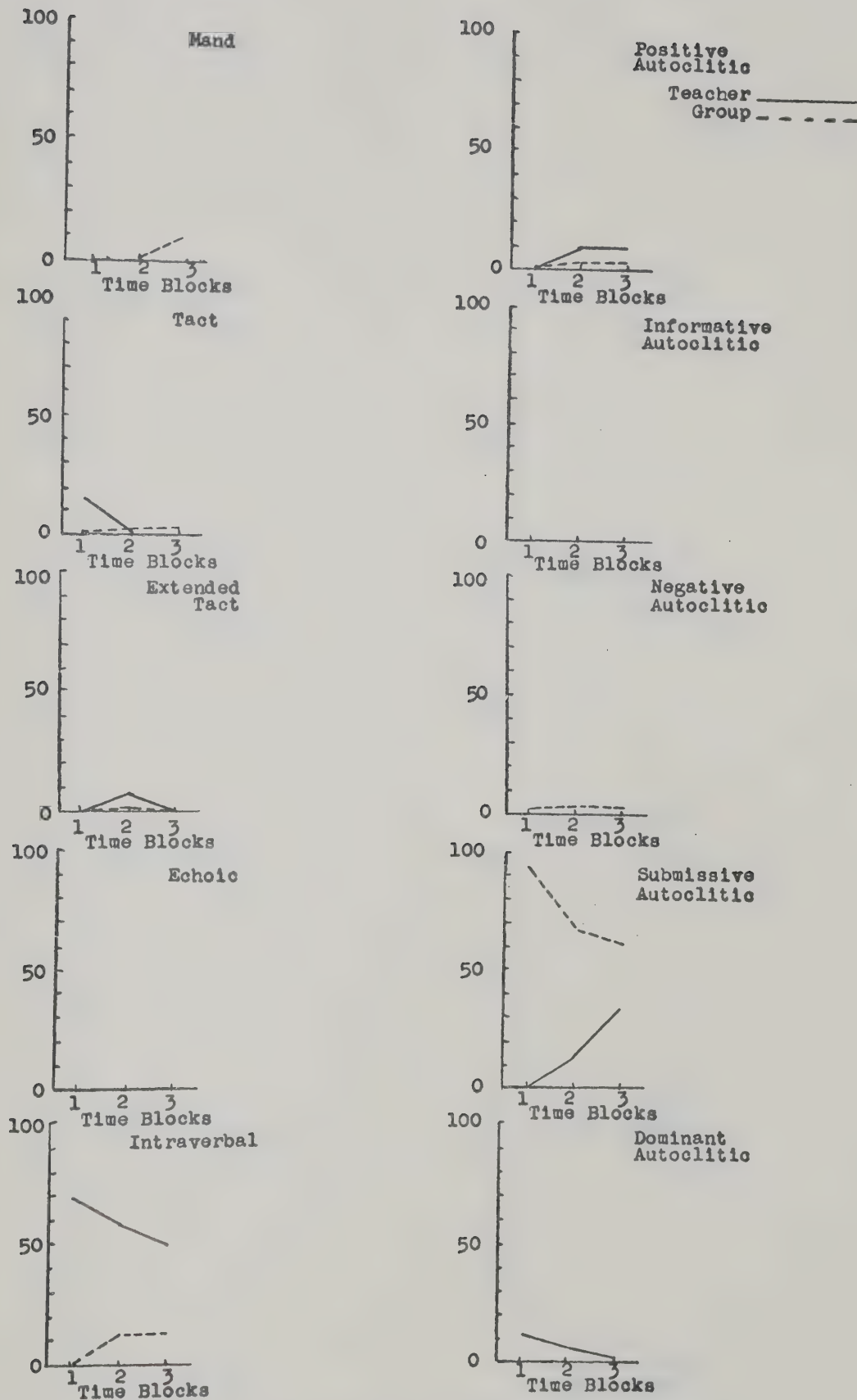


Figure C - Pre-test operant profile, percentage occurrence of operants over time blocks. Case #2 - Max, Control Group #1

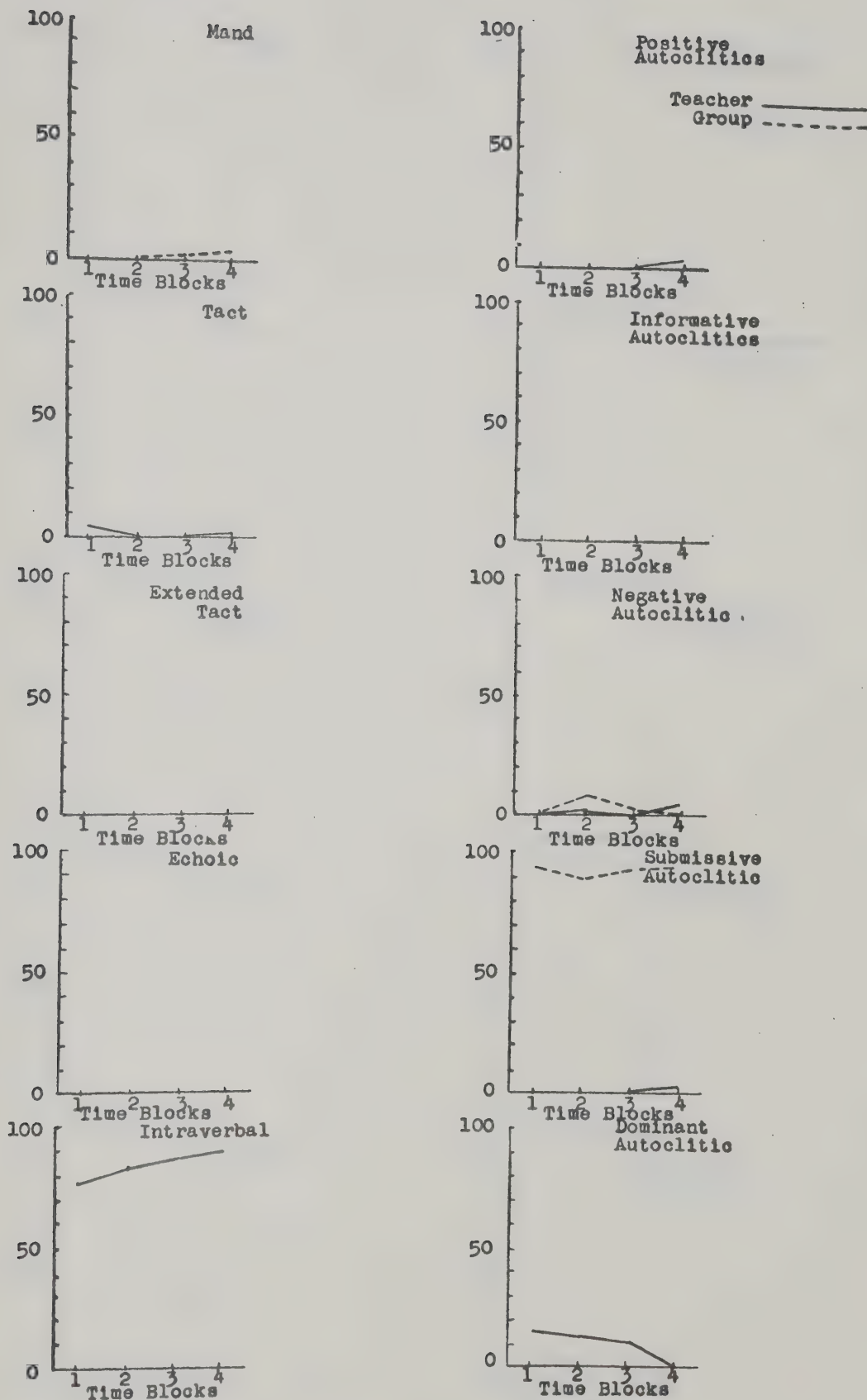


Figure D Post-test operant profile, percentage occurrence of operants over time blocks. Case #2 - Max, Control Group #1

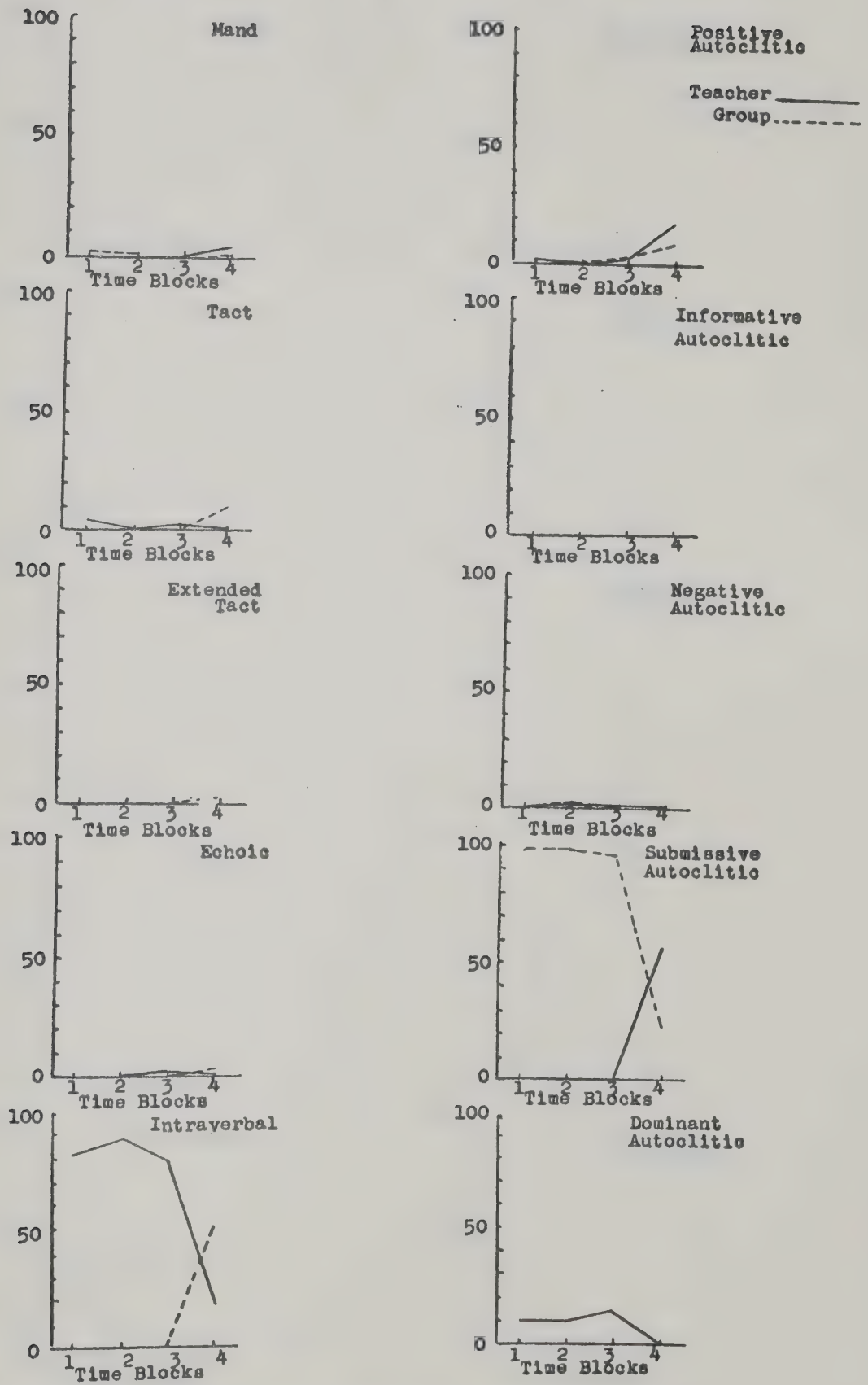


Figure E - Pre-test operant profile, percentage occurrence of operants over time blocks. Case #3 - Loretta, Experimental Observer

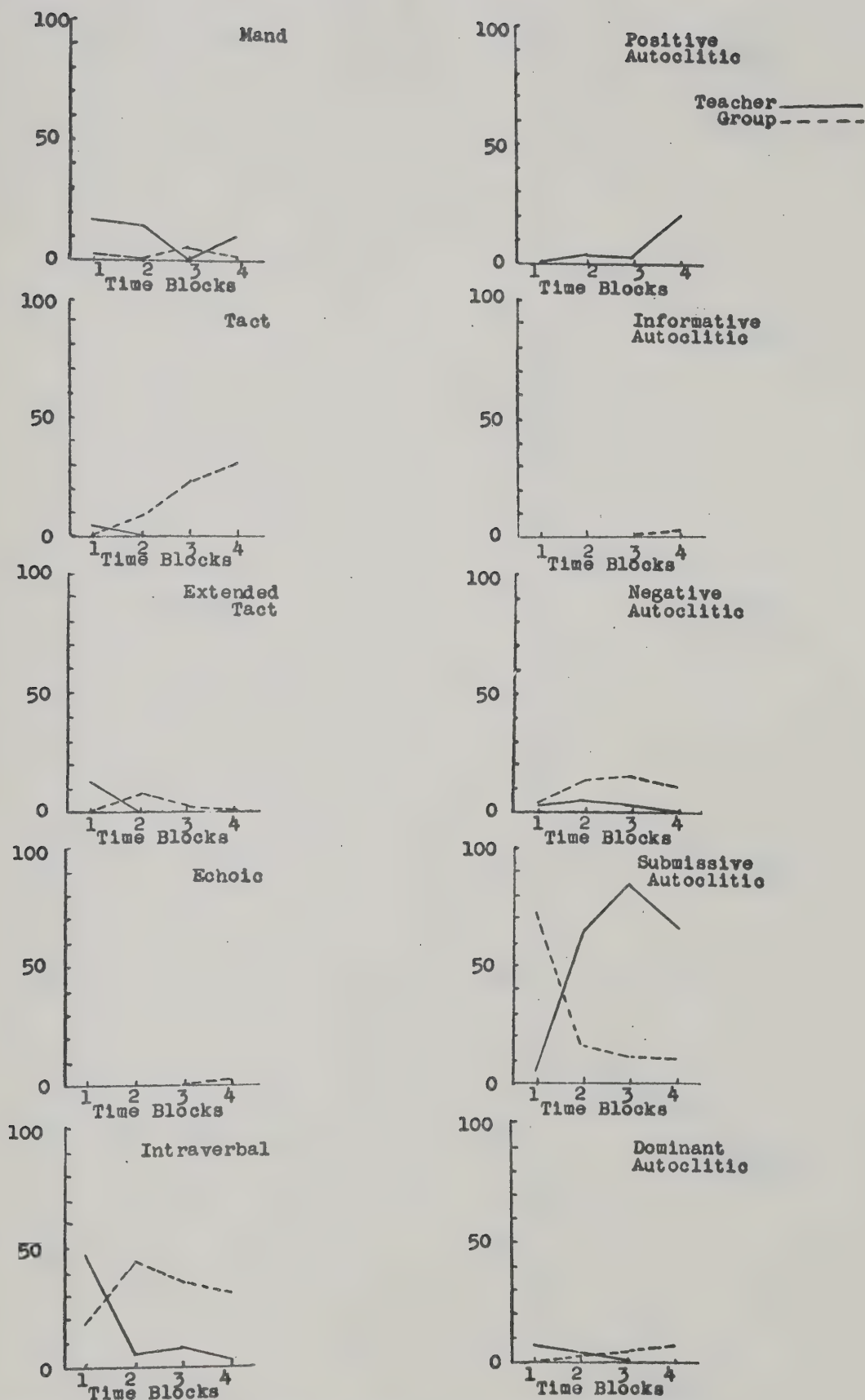


Figure F - Post-test operant profile, percentage occurrence of operants over time blocks. Case #3 - Loretta, Experimental Observer

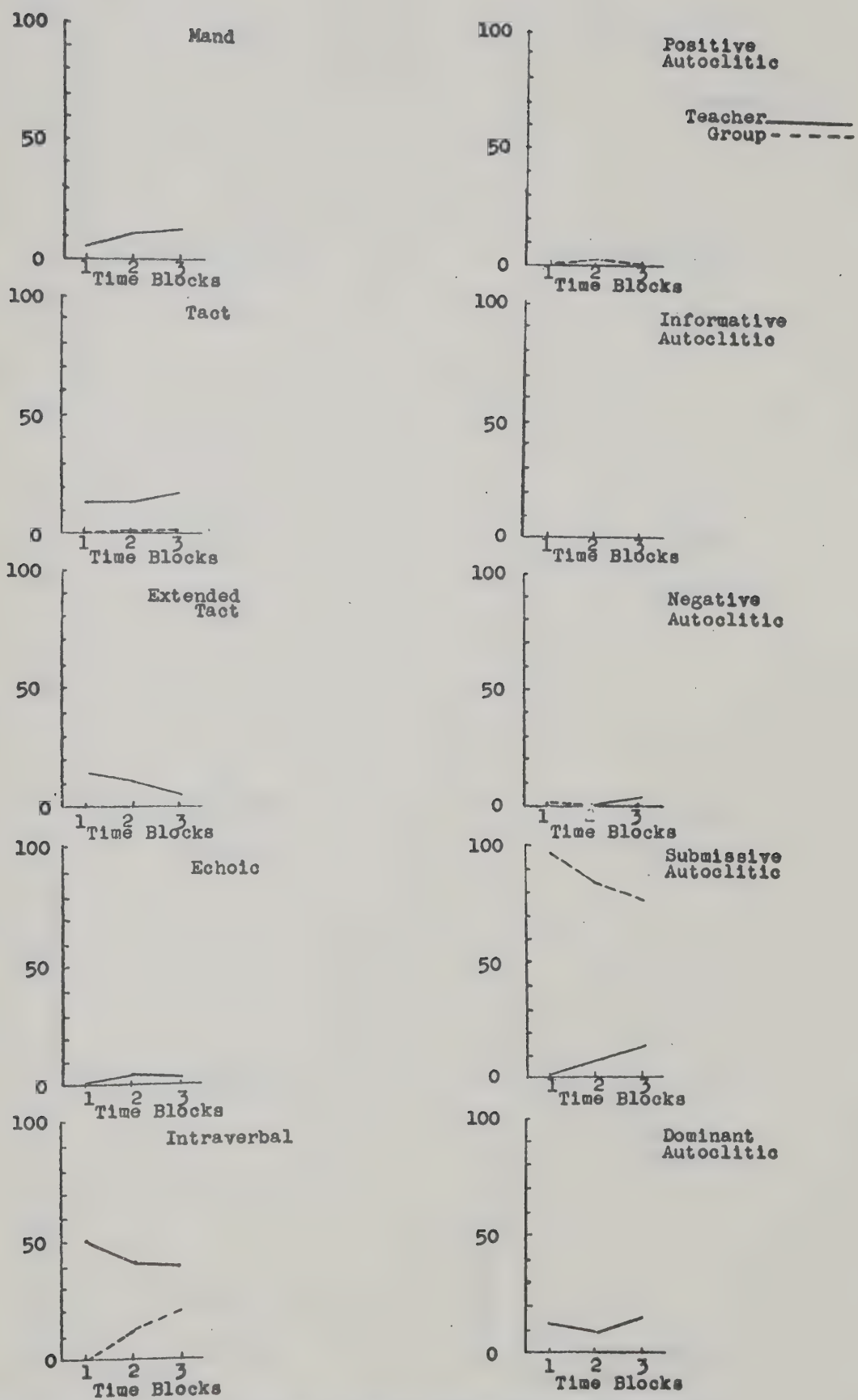


Figure G - Pre-test operant profile, percentage occurrence of operants over time blocks. Case #4 - Fred, Control Group #2

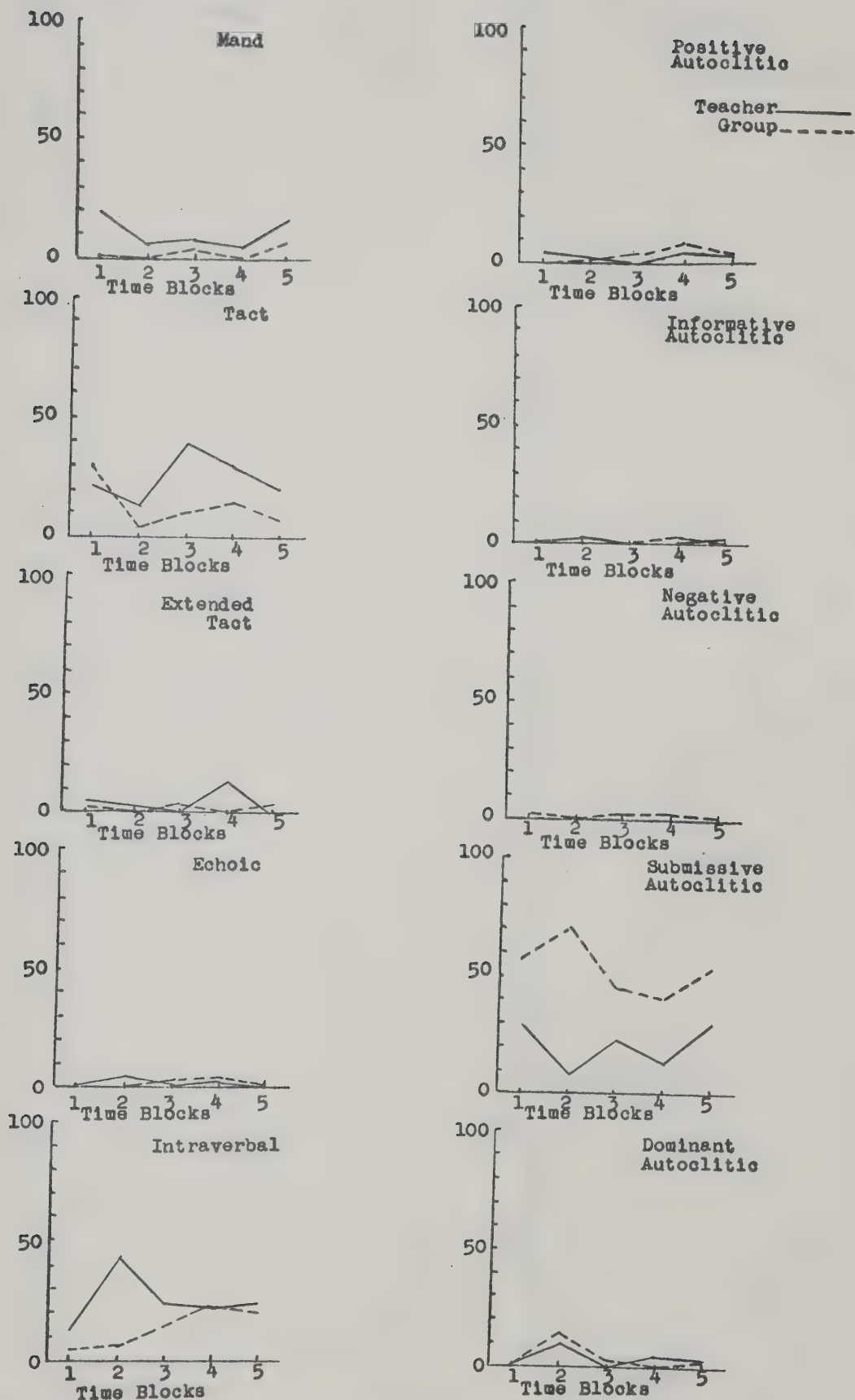


Figure H - Post-test operant profile, percentage occurrence of operants over time blocks. Case #4 - Fred, Control Group #2

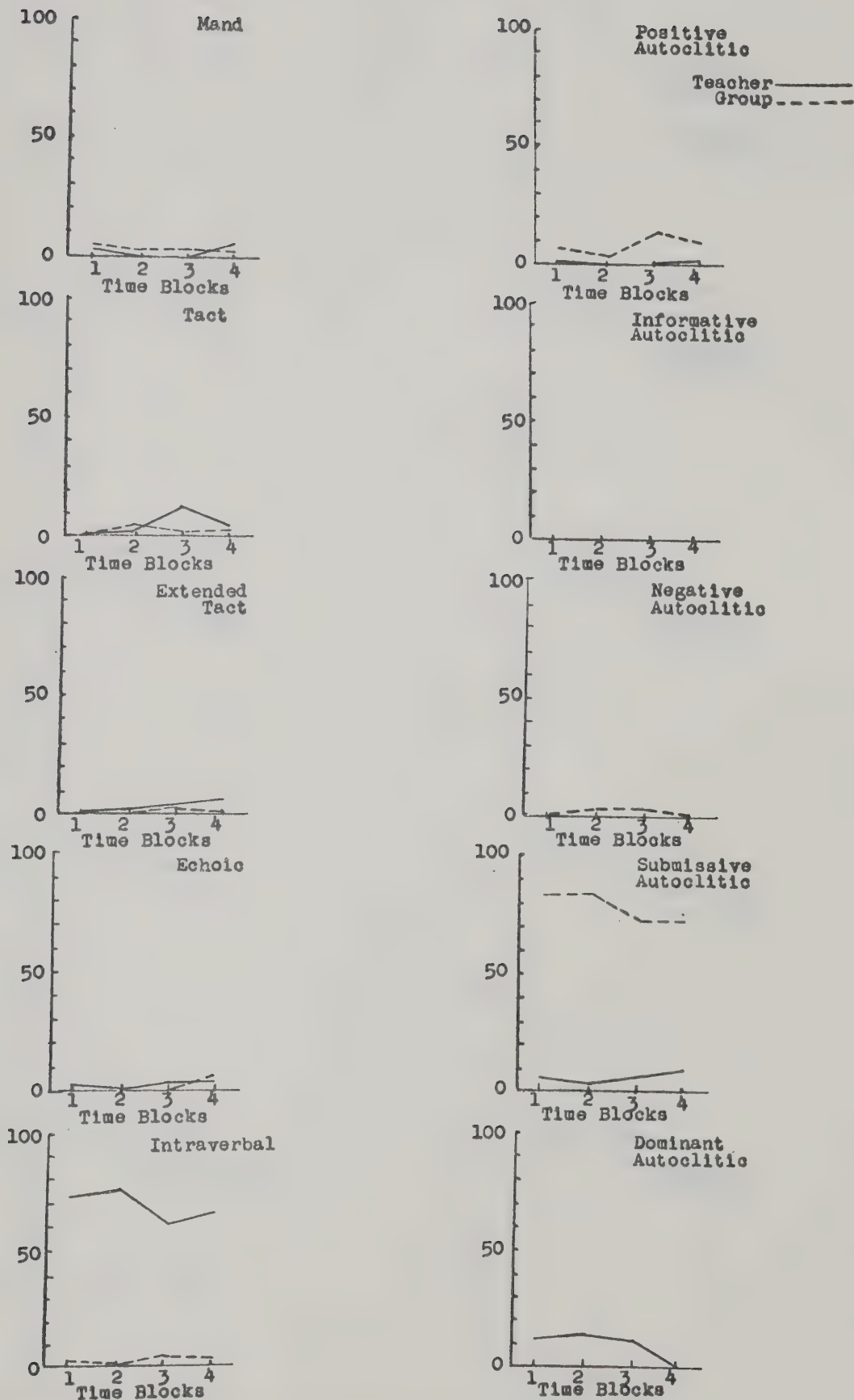


Figure I - Pre-test operant profile, percentage occurrence of operants over time blocks. Case #5 - Denis, Experimental Observer

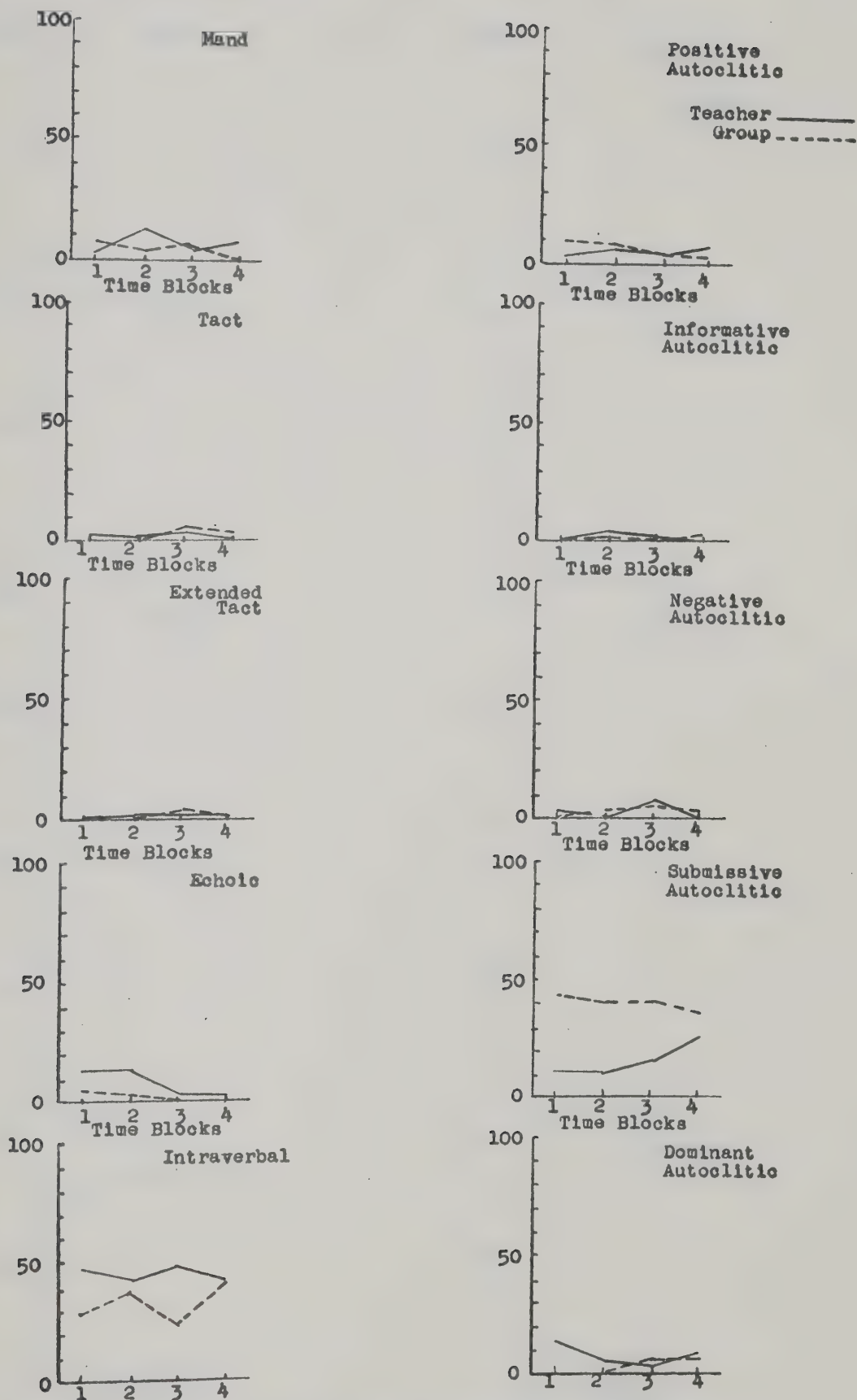


Figure J - Post-test operant profile, percentage occurrence of operants over time blocks. Case #5 - Denis, Experimental Observer

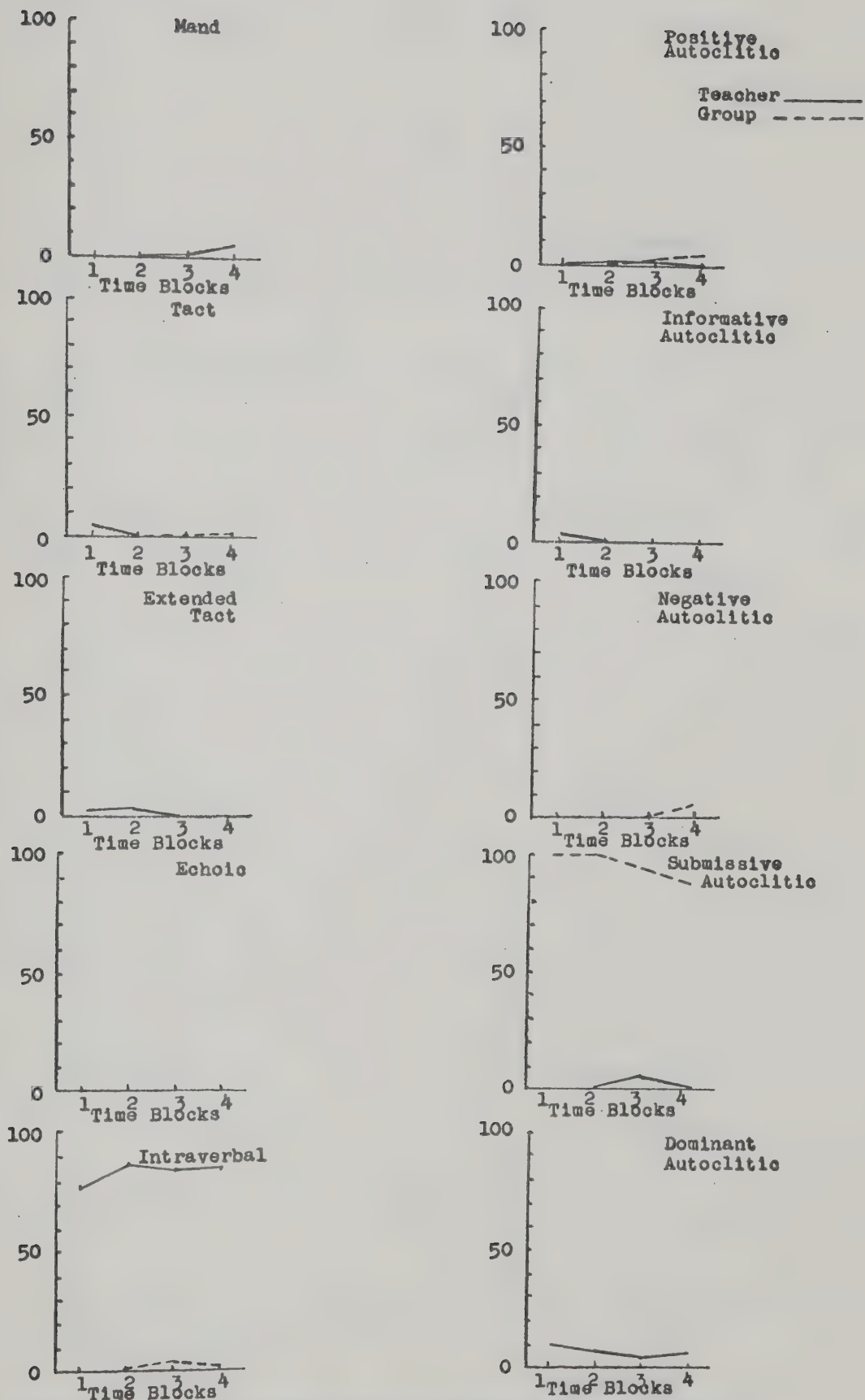


Figure K - Pre-test operant profile, percentage occurrence of operants over time blocks. Case #6 - Reg, Experimental Participant

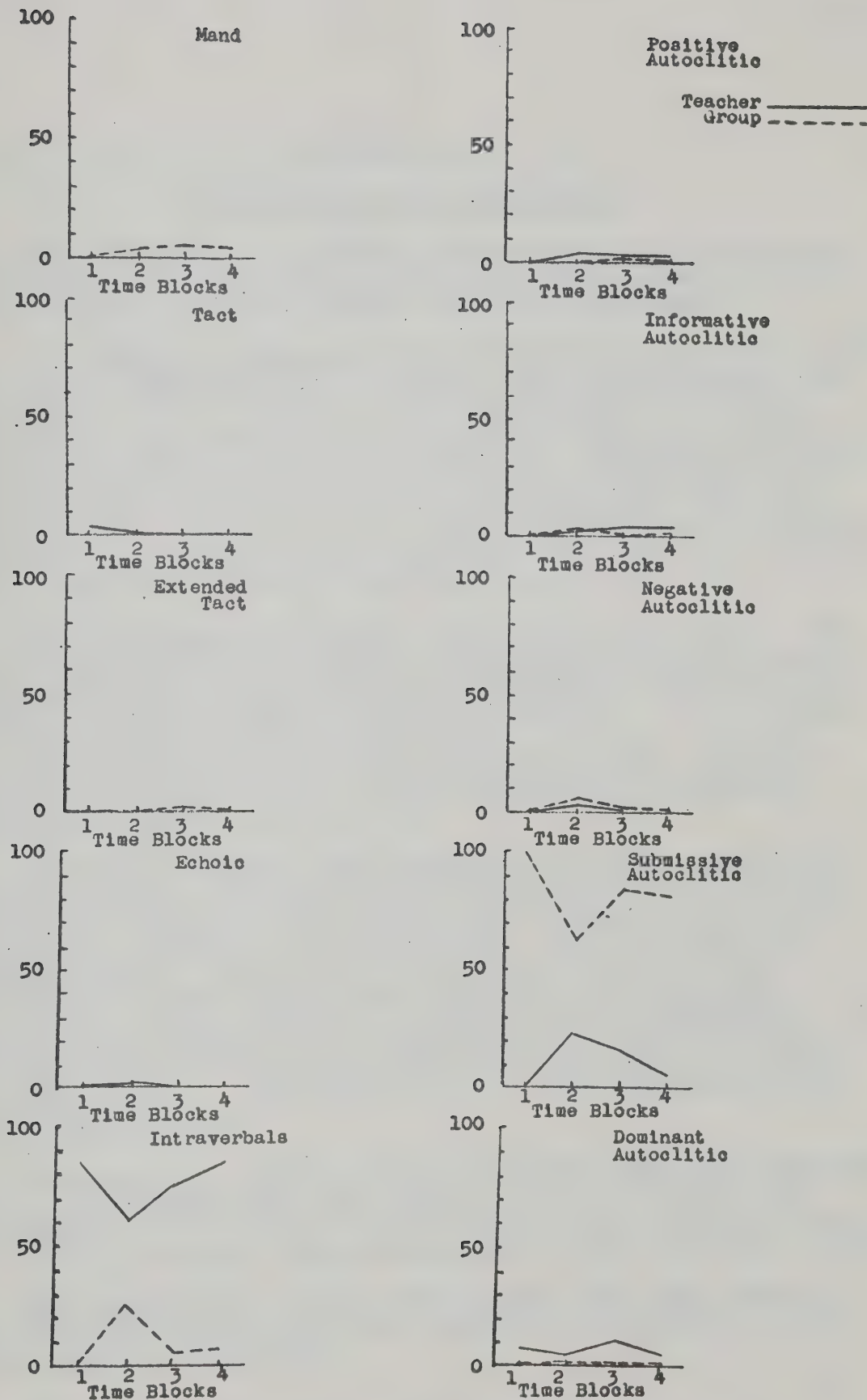


Figure L - Post-test operant profile, percentage occurrence of operants over time blocks. Case #6 - Reg, Experimental Participant

APPENDIX VII

Course Evaluation Assignment

The following is a summary of the positive and negative evaluative judgments obtained from the Participant and Observer groups in a written course evaluation assignment.

(1) Positive Comments - The consensus was that the manual was clear, comprehensible, relevant, and well-organized, and that it provided a framework for the workshops and demonstrations. The observation sheets were helpful in providing meaningful feedback to the participants. The video-tape playback was seen by the participants as providing excellent feedback, and a means of accurate discrimination. The organization of the course and the scheduling of activities around a strict time schedule was commended. The class knew exactly where they were and where they were going.

The classroom environment facilitated interaction. The instructors worked well together and related to each other, thus providing a good model for team teaching from both an organizational and human relations standpoint. The instructors were understanding and energetic. The fact that the group felt free to share their problems reflects favorably on the instructors: that is, the appropriate atmosphere encouraged personal interaction.

The course reached the objective of allowing each participant to work through a micro-training block for each set of skills. Powers of observation were sharpened through a combination of theory and application. The lectures were interesting and complemented the manual and demonstrations. Rating scales were useful and provided feedback to both participants and observers. In general the techniques of observation, feedback, and skill breakdown made one aware of the importance of developing affective and effective skills of communication. The emphasis was on real experience and total participation.

Through the variety of role-play situations and teaching areas, we realized that the use of the skill clusters was appropriate in a variety of situations in the classroom, and in fact any situation where one communicates with other people.

The emphasis was on the way we feel, the only course I have ever had dealing with this important dimension. A profound learning experience.

The outcomes and rewards of this instructional method greatly outweigh those achieved through the traditional lecture method. The course was one of the most useful and practical courses taken in my preparation for teaching. The importance of observation, development and practice of skills, are advantageous to those who will be entering a communicating profession. The experiences in class have increased my self-confidence in both teaching and other life-situations. Hope you will continue with it because I am sure it will become better each year. Appreciate the opportunity to provide input for change, and improvement of the course.

The course was fun. It helped me to relate to various people in the class, and to understand them. An enjoyable experience.

(2) Negative Comments - Observers admitted to learning about skills, but wanted opportunity to practice and use them appropriately. The Bales system needed more instruction and simplification to be understood by the observers. The observers felt left out, and wanted to participate. They also wanted to see the video-tape replay.

Time limitations meant that there was not enough time for all to participate, or to improve skills to excellent performance. More time was needed to demonstrate and practice the clusters. At times the micro-counselling problems became too personal. Individual informal discussions after the workshops would have been helpful. We were too rushed, and there were no open discussions sufficiently long enough to discuss problems in one area before we were involved in a new skill area.

A halo effect for individual participants biased ratings in the micro-counselling sessions at the beginning of the course. However this did not happen in the micro-teaching sessions.

The classroom was too small for informal practice sessions. The video camera and television screen restricted space in which to move for the participants, and made them a little nervous at the beginning of the course.

Some of the terms were confusing. Needed more discussions on differences between skills before actual demonstrations. To expect one to develop these skills in the course of one-half term is unrealistic. The criticism of observers was too negative. Not enough praise given for things done right. A lot of destructive rather than constructive criticism given by the group. Participants experienced frustrations in accepting criticism and benefitting from it in the initial workshops.

Not enough time was available to make the transition from dyadic skill practice to group practice; or from high school instruction to elementary. There were times when a five-minute block of time was not sufficient to practice a skill. In role play, the helpee sometimes made it difficult for the helper to demonstrate the skills. Sometimes a repeat of an excellent performance showed signs of deteriorating.

No time available for individual instruction and/or individual problems. While agreeing about the need for research, we still felt uneasy about being used as 'subjects'. The all-day workshop was too intense, and fatiguing. Repeating the same situations in the micro-training block was boring.

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